

AGRICULTURAL MARKETING IMPROVEMENT STRATEGIES PROJECT

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Prime Contractor: Abt Associates Inc.

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Deloitte Haskins & Sells,

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AGRICULTURAL MARKETING IMPROVEMENT STRATEGIES PROJECT

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GAMBIA

STUDY OF THE PRIVATIZATION
OF THE GAMBIA PRODUCE
MARKETING BOARD

FEBRUARY, 1989

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Submitted to the
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GLOSSARY OF ABBREVIATIONS

ADB	-	Agricultural Development Bank
BICI	-	Banque Internationale pour le Commerce et l'Industrie
CBG	-	Central Bank of The Gambia
CRS	-	Catholic Relief Services
CSD	-	Central Statistics Department
EEC	-	European Economic Community
ERP	-	Economic Recovery Program
FAQ	-	Fair Average Quality
GCDB	-	Gambia Commercial and Development Bank
GCU	-	Gambia Cooperative Union
GOS	-	Government of Senegal
GOTG	-	Government of The Gambia
GPA	-	Gambia Port Authority
GPMB	-	Gambia Produce Marketing Board
GPMC	-	Gambia Produce Marketing Company
GRTC	-	Gambia River Transport Company
GUC	-	Gambia Utilities Corporation
IBAS	-	Indigenous Business Advisory Service
LBAS	-	Licensed Buying Agents
MOA	-	Ministry of Agriculture
MEPID	-	Ministry of Economic Planning and Industrial Development
MOFT	-	Ministry of Finance and Trade
NIB	-	National Investment Board
ODA	-	Overseas Development Administration
PE	-	Public Enterprise
SCBG	-	Standard Chartered Bank of Gambia
SME	-	Small and Medium-Scale Enterprise
SOE	-	State-Owned Enterprise
SSE	-	Small-Scale Enterprise

GOTG FISCAL YEAR

July 1 to June 30

GPMB FISCAL YEAR

December 1 to November 30

STUDY OF THE PRIVATIZATION OF
THE GAMBIA PRODUCE MARKETING BOARD

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EXECUTIVE SUMMARY

In July 1986, USAID and the GOTG reached agreement on a PL 480 Title II, Section 206 food aid program. The US \$6 million 3-year program, to be completed in 1989, provides for donations of 7,000 tonnes of rice annually to help cover Gambia's food deficit. The agreement set certain conditions, largely related to rice and fertilizer prices and marketing. However, one specific condition relating to GPMB specified that the GOTG would announce a plan and schedule for the ultimate divestment and privatization of GPMB before it received the final tranche of rice under the program. This study is, therefore, intended to assist GOTG in meeting this condition.

Groundnut production and marketing has been, and still remains, the mainstay of the Gambian economy: groundnuts and related products typically account for 75 to 95 percent of export revenues; groundnut cultivation, transport, processing, marketing, and ancillary services provide a major source of employment; groundnut production is larger than all the other major crops put together; for many near subsistence farmers, sales of groundnuts provide the only source of cash income to buy basic necessities; and, groundnuts provide a vitally important food source (see sub-section 2.1).

Despite a stated GOTG objective to increase production, the sub-sector has contracted in size over the past 15 years. Problems constraining sub-sector development include: low productivity at the farm level, identified by low and variable yields, an extensive system of cultivation relying on manual labor, and generally poor soils; pests and diseases that contribute substantially to an estimated 30 to 40 percent of crop lost annually; an inefficient input and credit delivery system; low levels of farm mechanization; limited research and extension services; vacillating pricing policies; and, finally, GPMB's role as an agent for the over-taxation of groundnut producers. The complexity of issues involved suggests the need for a commodity systems approach: the notion that privatizing GPMB will resolve all the problems of the sub-sector is facile (see sub-section 2.4).

The range of GPMB activities has narrowed considerably since its inception in 1973. This process has accelerated under the terms and provisions of a 3-year performance contract signed with the government in December 1987. The GPMB's main current responsibilities relate almost exclusively to groundnut purchase, processing, and marketing (see sub-section 3.1).^{1/}

^{1/} GPMB also runs two rice mills and a cotton ginnery, which involves the Board in setting producer prices, buying, processing and selling milled rice and cotton lint and seed, together with the importation of agricultural inputs for cotton. The scale of these operations is, however, marginal to groundnut marketing.

At the same time, GPMB has effected a number of changes to improve its operational and financial performance (see sub-sections 3.2 - 3.3). A new organization and management structure has been introduced together with a staff audit which resulted in substantial manpower cost savings. Non-strategic operations have been reviewed and associated assets disposed of wherever possible. With assistance from government, in the form of retiring the Board's outstanding debt, the financial position of the Board has improved dramatically. Under the terms of the performance contract, GPMB is required to meet a number of financial targets for FY 1987/88, relating to profit level, liquidity and containment of overhead expenditure. Although some slippage has occurred in meeting the liquidity target, third quarter results suggest that the Board will meet its required profit level and be well within the overhead cost limit.

The performance contract is to be welcomed as a step in the right direction towards increased GPMB efficiency. There is, however, no mechanism within the performance contract for ensuring that GPMB operates to its maximum efficiency. The Board can always meet quantitative targets such as profit level, since the producer price level is the residual in a calculation of a predetermined level of profit. There is a danger that without GPMB securing major efficiency gains, producer prices will not be adequate to sustain interest in groundnut cultivation, once subsidies are removed. This could set off a vicious circle of low producer prices leading to low marketed output, leading to even lower producer prices as Board overheads are spread over ever diminishing sub-sector revenues.

The above problem is exemplified in GPMB's operation of the oil mill (see sub-section 3.4). The mill has been run almost consistently at a loss. A failure to appreciate the need for value to be added has meant that in most years GPMB has lost money operating the mill, even before accounting for operating and overhead costs, plant depreciation and interest charges.

Government policy towards the privatization potential of GPMB is informed by the concept of "core" and "peripheral" activities, the latter, by definition, being regarded as divestiture candidates (see sub-section 4.1). Government's desire to maintain GPMB's core, or strategic, operations under its control undoubtedly reflects the importance of the groundnut industry in agriculture and the national economy.

For privatization to be practicable, a number of pre-conditions have to be met. These relate to the ability and willingness of the private sector to assume responsibility for activities to be divested. A review of the general economic environment in The Gambia, private sector size and presence, likely margins available within the industry, and private sector access to finance, indicates that private sector participation in key Board activities is feasible (see sub-section 4.2). Although difficult to quantify a priori, there would also appear to be substantial efficiency gains

to be secured in privatizing the key Board functions of crop purchase, processing and marketing of groundnuts (see sub-section 4.3).

The proposed divestment strategy for GPMB (see sub-section 5.1) is therefore designed to liberalize the three key areas of GPMB's involvement in the groundnut marketing chain, specifically by:

- encouraging greater private trader involvement in groundnut purchasing as an initial step towards upward vertical integration into depot operation and management;
- making provision for ultimate private sector management and control of the oil mill after an interim period under a management contract;
- allowing large local, and possibly foreign, trading firms to become involved in groundnut marketing as a precursor to downwards vertical integration into operating and managing decorticating plant and terminal facilities.

The strategy is gradualist and explicitly addresses two key concerns over privatizing GPMB: government loss of control over financial flows, especially foreign exchange; and, the possibility of replacing a public with a private monopoly. A residual role for the GPMB as a non-trading regulatory agency is envisaged.

The proposed time horizon (see sub-section 5.2) to reach this end-state for GPMB is 6 years. The time horizon is indicative rather than definitive but should allow sufficient time so that: the managerial absorptive capacity of GPMB, NIB and other government officials to plan, implement, and monitor change is not overloaded; and, if shortfalls occur in expected private sector performance, revisions to the strategy can be made.

The successful implementation of the divestment program will require a number of complementary actions and programs (see sub-section 5.3). These include government policy programs, which effectively support the strategy. A number of studies will need to be undertaken to provide guidance to decision-making and actions. Enabling legislation will also be required for the establishment of the restructured GPMB; and, finally, the whole program will require careful coordination, which could best be provided by intermittent technical assistance, with sufficient funding for ad hoc specialists as required.

I. INTRODUCTION

1.1 Background to the Study

In July 1986 USAID and the GOTG reached agreement on a PL 480 Title II, Section 206 food aid program. The US\$ 6 million 3-year program, to be completed in 1989, provides for donations of 7000 tonnes of rice annually to help cover Gambia's food deficit.

The agreement set certain conditions, largely related to rice and fertilizer prices and marketing. However, one specific condition relating to GPMB specified that the GOTG would announce a plan and schedule for the ultimate divestment and privatization of GPMB before it received the final tranche of rice under the program. The study is, therefore, intended to assist GOTG in meeting this condition.

1.2 Scope of Work

The study basically calls for an examination of GPMB's current operations and an appraisal of the potential of the private sector to assume responsibility for these activities. To the extent that this is shown to be practicable and desirable, the study is required to produce a divestment strategy and implementation plan. The full study terms of reference are reproduced in Annex 1.

1.3 Conduct of the Study

The study was completed over the period October 17th to November 30th. Findings are based on a review of the extensive body of literature on GPMB and interviews with GPMB personnel and other relevant government officials and private sector representatives. A bibliography and list of personnel interviewed are provided in Annexes 2 and 3 respectively.

1.4 Acknowledgements

The consultants would like to record their appreciation of all those individuals who provided information and guidance, particularly the officials of GPMB without whose cooperation the study would not have been possible.

1.5 Report Structure

Section 2 of the report provides an overview of the groundnut sub-sector and GPMB's role within it, with emphasis on sub-sectoral problems and issues.

The specific operations related to groundnut purchasing, processing and marketing undertaken by GPMB are dealt within Section 3. Recent changes within the Board, implemented under the recent Performance Contract signed between GPMB and government, are discussed. The Board's recent overall financial performance is reviewed and the operational and financial efficiency of key Board activities is evaluated with particular reference to the processing of groundnuts.

Section 4 examines the potential for privatizing Board activities. Government policy towards privatization generally, and the groundnut sub-sector in particular, is reviewed. The practicability of the private sector assuming control of critical Board operations is examined in terms of private sector presence, capability and interest together with perceived constraints to participation. The section concludes with a discussion of the primary concerns which the privatization debate raises.

Finally, Section 5 presents a divestment strategy based on the study findings. A realistically phased implementation plan is delineated together with an outline of the necessary supporting actions and programs which would be required for successful implementation.

2. THE GROUNDNUT SUB-SECTOR

2.1 The Role of Groundnuts in the Economy

Groundnut production and marketing has been, and still remains, the mainstay of the economy of The Gambia:

- groundnuts and related products account for the overwhelming majority of the country's export earnings (the proportion has typically ranged between 75 and 95 percent of total export value);
- groundnut cultivation, transportation, processing and marketing provide the main source of employment opportunities for the country; it is a labor-intensive crop at farm level (requiring about 120 and 70 person days per hectare, respectively, for manual and animal traction production systems), transportation of groundnuts within the country accounts for 90 percent of freight business for barges and over 50 percent of the trucking business, and the GPMB, GCU and other marketing agents contribute significantly to both off-farm rural and urban employment in the country;
- national groundnut production is larger than all the other major crops (coarse grains, rice) put together and, in each of the country's divisions, accounts for at least 44 percent and as much as 66 percent of major crop production output (Table 1);
- for many near-subsistence farmers, sale of groundnuts provides the only source of cash income to purchase the basic necessities for family life;
- groundnuts provide a vitally important food source for the country; GOTG estimates that over 5,000 tonnes of nuts are consumed annually as condiments or food additives, plus an average of 2,300 tonnes of refined groundnut oil are utilized annually in domestic vegetable oil consumption.

In short, groundnut production and marketing is of vital importance to the economy of The Gambia and in maintaining the nutritional balance of the nation's diet.

2.2 Production and Price Trends

Groundnut production trends over the past 14 years are presented in Table 2. Annual production has been far from stable, with a period high of over 150,000 tonnes in 1982/83 and a low of 60,000 tonnes in 1980/81. While many factors contribute to explaining the large swings in annual production volumes, two predominate, namely: variations in both yield and producer price.

Drought conditions have been more severe and more frequent in the past decade than in recent memory; average yield from the harvested acreage of groundnut in drought-stricken 1980/81, for example, was 874 kg. ha. compared with 1,593 kg. ha. in 1982/83, when rains were

TABLE 1

Production of Major Crops, by Region
1987/88, The Gambia

Crop	The Gambia	Western	North Bank	Lower River	MID North	MID South	URD
'000 Tonnes							
Groundnuts	120.0	25.0	27.6	11.0	18.3	16.1	21.9
Millet	49.6	7.2	17.5	5.9	5.7	9.3	3.9
Sorghum	6.6	2.0	0.1	0.1	0.5	0.1	3.9
Maize	15.4	1.6	1.8	0.5	2.3	3.2	6.1
Findo	0.4	0.1	0.1	-	-	0.1	0.1
<u>Total</u> <u>Coarse grains</u> 14.0		72.0	10.9	19.5	6.5	8.5	12.7
Rice	20.4	2.6	2.8	5.2	1.0	8.0	0.7
Cotton	0.8	-	-	-	-	-	0.8

Source: PPMU, MOA/MWRFF, May 1988.

plentiful; i.e. harvested yields were more than 80 percent higher in the latter season (and, indeed, if based on planted rather than harvested acreage, the average yield was well over 100 percent higher).

International prices for groundnuts and derivative products have shown erratic movements between 1974/75 and the present. Groundnut oil sold for over US\$1000 per tonne as an annual average in 1974, 1978, 1981 and 1984 and for less than US\$600 per tonne in 1982, 1983, 1986 and 1987. At the same time producer prices do not show a predictable correlation with fob groundnut prices (Table 3). Up to 1984/85, producer prices averaged about 60 percent of the fob price. The rationale, initially, for pitching producer prices at levels well below world prices was that the GPMB could build up a stabilization reserve such that it could support producer prices in the event of a groundnut price collapse. Subsequently, the reserve became an instrument for financing Government recurrent and development expenditures. i.e. groundnut pricing was used as a surrogate for a broad-based rural income tax. In 1977, the stabilization reserve was approximately 50 million Dalasis. It had become negative to the amount of 21 million Dalasis by 1983.

The direction of the groundnut pricing policy was reversed in 1985/86. With the encouragement of IMF, IBRD and other donors, the

GOTG introduced an Economic Recovery Program which had several elements that had a direct impact on participants in the groundnut sub-sector^{1/}, specifically:

- exchange rate reform (i.e. floating the Dalasis) and, thereby, eliminating the gap between official and parallel market rates;
- stimulating agricultural production through pricing policy incentives, removal of subsidies, shifting of resources to increase the efficiency of extension services provided for agriculture, and privatization of services;
- reforming the public sector by, inter alia, reorganizing parastatal and privatizing selective activities and operations;
- rationalizing the financial system by raising interest rates, reducing credit creation, and limiting the money supply.

One immediate manifestation of the ERP measures for groundnut farmers was that nominal producer prices were doubled (from 620 to 1,100 per tonne) and, in 1986/87, increased by a further 50 percent to 1,800 Dalasis per tonne. Subsequently, producer prices were reduced, reaching D.1,100 for the 1988/89 season.

^{1/} For a full description of ERP elements and progress up to mid-1987, see African Economic Policy Reform Program, PP, USAID, September 1987, PP.10-12.

TABLE 2

Groundnuts: Planted Area, Harvested Area and Production in the
Gambia, 1974/75 to 1987/88

Year	Planted	Area Harvested	Yield Kg/ha	Production \$000 Tonnes
1974/75	104.80		1.385.00	145.20
1975/76	96.80		1.429.00	141.10
1976/77	107.60		1.329.00	143.00
1977/78	105.40		949.00	100.00
1978/79	106.20		1.256.00	133.40
1979/80	96.90	67.80	986.00	66.90
1980/81	82.50	68.90	874.00	60.20
1981/82	92.50	80.70	1.349.00	108.90
1982/83	98.50	95.00	1.593.00	151.40
1983/84	110.00	97.20	1.172.00	113.80
1984/85	98.50	91.40	1.150.00	105.10
1985/86	65.90	58.50	1.295.00	75.80
1986/87	-	-	-	110.95
1987/88	-	-	-	120.00

1. Area estimates are in 1000's hectares
2. Groundnuts are reported in undecorticated form.

Source: PPMU (Ministry of Agriculture)

The real price to groundnut producers (i.e. after adjusting for intervening price escalation as measured by the consumer price index), however, has now reached a 15-year low reflecting in part the considerable inflation in the CPI that was experienced over the 1984/85 - 87/88 period as a result of the economy adjusting to the floating exchange rate.

Present Government policy is to eliminate all element of producer price subsidy caused by the major adjustments of the mid-decade. This would result, if current world groundnut price levels are maintained and domestic marketing costs remain at current levels, in a producer price of about D.900 per tonne for the 1989/90 season.

Following three years of depressed prices, prices in the oilseeds market have increased strongly in 1988. It is estimated that these higher prices will persist through the beginning of 1989. However, the major factors contributing to favorable short-term prospects (e.g. the drought in the U.S. Midwest) are essentially transitory in nature. The latest World Bank projections envisage prices for groundnuts and products in year 2000 not significantly higher in real terms than current levels (see Annex 4). In the short-term, one significant development that will result from GOTG placing producer prices on a world market basis will be that the differential between Gambian producer prices and Senegalese producer prices for groundnuts will widen (for the 1987/88 season, the Senegalese producer price for groundnuts was D.590 per tonne higher than the corresponding Gambian price and for the 1988/89 season may show a differential of approximately D.500 per tonne.). However, pricing policy development in Senegal indicate that GOS are also moving towards, albeit at a slower pace, a producer price basis that is closer to world market parity. The short-term implication is that Gambian groundnut producers with access to Senegalese groundnut buyers will have greater incentive to sell their produce across the border (or sell to Senegalese traders in The Gambia) to take advantage of the price premium. The degree to which this cross-border trade will take place, however, is not simply a function of the size of the price premium: cross-border trade is illegal and there are significant penalties for contravening the law; the groundnut transportation system is focused on moving nuts down river to Banjul; producers may show reluctance to break selling arrangements with Gambian buyers that also provide them with access to credit and inputs; most recent GOTG policy which, effectively, set target volume purchases for GCU in order to minimize GOTG subsidized groundnut price exposure with the result that some farmers had no choice other than to sell across the border once GCU had met its target; and, a key factor may be the timely availability of trade cash to purchase product from farmers i.e., the Gambian farmer will accept the domestic price, albeit at a discount to the Senegalese price, if it is on a cash-on-delivery basis. Conversely, if cash is not available from Gambian buyers, than, Senegalese outlets may provide a cash purchase source. But, a continued D.500 per tonne price differential will attract a significant proportion of the Gambian crop to Senegalese markets.

TABLE 3

Relationship between Producer Price and FOB
Prices for Groundnuts, and Real Producer Price, 1974/75 - 1987/88
(Dalasis per tonne decorticated)

Year	Price to Producer	F.O.B. Price	Producer Price As a Percent of FOB Price	Real Producer Price (Constant 1976/77 ^{1/} Prices)
1974/75	306	623	49	428
1975/76	365	536	68	425
1976/77	402	824	48	402
1977/78	421	714	59	382
1978/79	421	665	63	355
1979/80	425	560	75	341
1980/81	460	790	58	341
1981/82	500	643	78	343
1982/83	520	578	90	327
1983/84	450	1,291	34	245
1984/85	620	1,350	46	277
1985/86 ^{2/}	1,100	1,432	77	364
1986/87	1,800	1,642	110	408
1987/88	1,500	1,327 ^{3/}	113	302
1988/89 est.	1,100	1,474 ^{4/}	75	205

Notes:

^{1/} Deflated by the CPI^{2/} Dalasis floated.^{3/} Average for 9 months to end-August 1988^{4/} Budget estimate.

Sources: PPMU and GPMB

2.3 A Synopsis of The Marketing System

There are three key participating groups in the groundnut marketing system, namely: farmers; official groundnut buyers i.e. Gambian Cooperative Union (GCU) and private buyers; and the GPMB - the Board has monopoly rights over the purchase and export of groundnuts produced in Gambia.

Farmers: sell a portion of their groundnut production for cash income and use the balance for domestic consumption, for seeds for the next season, or to process to sell locally as confectionary nuts and groundnut butter. Some farmers, particularly those close to the Senegalese border and given a certain set of conditions (see earlier) may sell their groundnuts either in Gambia to Senegalese traders or transport their nuts across the border to sell in Senegal.

Official Groundnut Buyers: as required under the GPMB Act, groundnuts are purchased on behalf of the GPMB by licensed buying agents and traders for delivery to GPMB depots. The service of buying includes screening and weighing of the nuts and payment to farmers. Approximately 80 percent of annual purchases are made by the GCU (a parastatal) via 86 Cooperative Produce Marketing Societies (CPMS) located around the country. The remaining 20 percent is purchased by private sector buyers or traders (17 in total) for consolidation at their own marketing facilities. The GPMB pays buyers an allowance which should cover their marketing costs and yield a small profit.^{2/} Once the groundnuts are delivered to one of the eight GPMB depots or the two GPMB transit stations, the groundnut storage, processing into decorticated nuts, oil and oil cake and subsequent sale becomes the direct responsibility of the GPMB.

The GCU share of groundnut purchases has increased from about 40 percent of total in 1974/75 to 80 percent in 1987/88 (Table 4). This reduction in private sector involvement in the trade reflects that:

- the buyer's allowance is not set at a level that will attract and sustain private traders' interest (the allowance, in real terms, has declined by one-third since 1981/82.);
- the GCU is the de facto public sector primary groundnut and farm input marketing agency and, as a result, it can pass on losses to GOTG, has monopolistic control over farm input sales which it can sell on credit and, occasionally, is the conduit for providing gratuitous government handouts such as gifts of fertilizer (in recent years, the GCU accumulated debts of D32 million from its operations. GOTG purchased the debt from the GCDB in 1987/88, thereby releasing GCU from its financial obligations).

^{2/} G.E. Langan, 'Groundnut Marketing in The Gambia', See Bibliography.

Private groundnut buyers perform the same groundnut marketing function as the GCU but operate in a very different economic environment. Private buyers must realize a profit from their operations or it becomes uneconomic for their enterprise to continue. Private buyers and the GCU do not compete on an equal basis in this regard and this discourages private sector involvement in groundnut marketing.^{3/}

An important factor in the farmers' decision as to which buyer to sell their groundnuts is the buyer's role in agricultural input supply. Inputs that are supplied by groundnut buyers are usually issued on credit. Farmers will sell at least some of their groundnuts to their input supplier to cover their debt. Private buyers have traditionally issued seednuts and cash on credit to farmers. Significant amounts of fertilizer have not been supplied to farmers by private buyers because of the monopoly in fertilizer distribution by the GCU in the past (1981 to 1985) and perceived high risks in fertilizer marketing.^{4/}

The most recent comparative study on GCU and private trader marketing costs for groundnuts showed that GCU costs per tonne (D.131) exceeded the private buyers' cost (D.74) by 77 percent.^{5/}

The GPMB: the Board transports the groundnuts from its depots to the processing mills at Banjul and Kaur, generally as water cargo via The Gambia River Transport Co. Ltd (GRTC), a wholly-owned subsidiary of GPMB. The transport fleet (tug boats and lighters) are in very dilapidated condition. The depots are located between 400 km (Basse) and 66 km (Kerewan) from the Banjul mill (see Annex 5 for location of depots and distance from Banjul). A PPMU Report concluded that:

"While theoretically adequate lighter capacity exists for this operation, lack of advance transportation planning and the dilapidated condition of the facilities coupled with their demand for distribution of emergency food aid and conveyance of chemical fertilizers and seed up-country, often delays this operation. For example, the groundnut transfer to mills which should be completed by end of April sometimes runs up to July.^{6/} This was the case for the 1987/88 season, when even by the start of the 1988/89 season (November 1 1988) there was still an estimated 8,000 tonnes of groundnuts still to be shipped for processing from the previous season.

^{3/} G.E. Langan, Ibid. See Bibliography

^{4/} G.E. Langan, 'An Assessment of Agricultural Input Marketing in The Gambia within the context of the Economic Recovery Program', USAID, July, 1987.

^{5/} G.E. Langan, Ibid, P.22

^{6/} PPMU Paper No. 10, see Bibliography

TABLE 4

Groundnuts Delivered to GPMB Depots by the
GCU and Private Traders (Tonnes)

Year	Through GCU	Through Private Trade	Total	GCU as a Percent of Total
1974/75	56,387	78,340	134,727	41.89
1975/76	52,064	81,477	133,541	39.0
1976/77	51,173	73,261	124,436	41.1
1977/78	39,051	48,927	87,978	44.4
1978/79	71,533	48,008	119,541	59.8
1979/80	44,216	21,588	65,804	67.2
1980/81	35,568	9,286	44,854	79.3
1981/82	59,955	21,899	81,854	73.2
1982/83	90,490	36,910	127,400	71.0
1983/84	68,257	24,651	92,980	73.5
1984/85	41,530*	10,529	52,059	79.8
1985/86	41,892	10,158	52,050	80.5
1986/87	57,259	13,377	70,636	81.1
1987/88	51,325	12,167	63,492	80.8

* Includes 6,230t reserved for seed.

Source: Jones, 1986 and Langan, 1987 (See Bibliography)

GPMB is directly responsible for groundnut processing and the sale of its derivatives both to the export market and the local trade. The Board's products are: decorticated nuts; unrefined, crude oil for export; refined oil for local sale; groundnut cake (by-product of the oil processing process); previously, high quality confectionary nuts (now discontinued because of aflatoxin problems and lack of product volume); and relatively small quantities of nuts to meet emergency seed requirements.

The major business decision facing the GPMB each year is to decide how much of what product to sell. An analysis of the appropriateness of GPMB product mix in most recent years is presented later in this report. Two studies completed in 1985 concluded that the Board consistently lost money on its oil processing operations from the early 1970's through to the early 1980's.^{7/} The view of the authors of the studies was that the more perspicacious economic and financial decision would have been to merchandise decorticated nuts rather than oil.

At present, the marketing agent for the GPMB, based in the U.K., is the GPM Co. Ltd (GPMC). A NIB appraisal mission has reviewed briefly the operation of GPMC in the UK, met with the Board's major European-based customers and concluded that the scope of GPMC's operations should be curtailed. These actions, if taken, should be completed by the end of 1989. The export marketing activities of GPMC would then be taken over by GPMB staff in Banjul. The recent upgrading of the telecommunications system in The Gambia has made this move possible as communications between the Board and its major customers should not be adversely affected.

2.4 Problems and Issues

The groundnut sub-sector has contracted in size over the past fifteen years^{8/}, in the face of stated plans by the GOTG to increase groundnut productivity in order to increase rural cash incomes and foreign exchange earnings. The major problems constraining sub-sectoral development have become increasingly manifest. Although their nature may be known, solutions and required resources to redress the problems have been less forthcoming. Problem areas are not concentrated at any one point on the groundnut production and marketing chain - they are pervasive and, as a result, underscore the need for a comprehensive commodity systems approach to problem solving in the groundnut sub-sector.

At the farm level, the generic problem is "low productivity" as identified by low and variable yields, an extensive and/or shifting

^{7/} PPMU Paper No. 10 pp.26/27 and USAID 'Economic and Operation Analysis of the GPMB, USAID, pp. 50-56 See Bibliography.

^{8/} Annual production in the mid-1970's was above 140,000 tonnes; by the mid to late 1980's, annual production volume ranged between 75,000 and 120,000 tonnes.

cultivation system largely relying on manual labor (i.e. very limited machine or draught power), and very high post-harvest losses. Specific problems that constrain production include:

- pest and diseases. Although the pest and diseases that attack groundnuts are known and can be controlled, MOA estimate that between 30 and 40 percent of the national crop is lost annually through inappropriate treatment or non-treatment;
- poor soils. Expect for the alluvial soils of the river basin, the soils are mainly fragile, low fertility, poor structure and lacking humus;
- low levels of literacy and numeracy of farmers act as impediments to farmer involvement in farmer-run production and marketing organizations;
- an inefficient input and credit delivery system. Farm input and formal agricultural credit is largely provided by the GCU. A recent study on agricultural credit^{9/} concluded that: the financial management and operational efficiency track - record of GCU has been very poor; farmer members of cooperatives have become divorced from the decision-making process; government has used the GCU as a means of transferring, at unacceptable cost, resources to the rural sector; and, in addition to the need to revamp the existing credit delivery system, the private sector must be given an opportunity to compete in the input and farm credit business if the cooperative sector is to perform agricultural input and credit services at minimally acceptable levels;
- low level of farm mechanization. MOA studies show that only a very modest percentage of farmers use draught power in groundnut production even after years of government promotion (reflecting lack of training, credit etc.). Yet expansion of current acreage in groundnuts is, largely, a function of lack of labor rather than lack of land;
- in a large part reflecting the inadequacy of fiscal provision, services providing research, extension, seed multiplication etc. have not provided the necessary stimulus to increased productivity in groundnut production for many years. For example, the predominant groundnut variety grown in The Gambia was introduced, from Senegal, over 15 years ago. Subsequently, Senegal has not only changed the stock of this variety but also replaced the variety with zonal-specific stock. (However, the national average groundnut yield in Senegal is no higher than the national average yield in the Gambia - soil deterioration and drought in the Senegalese 'Peanut Basin' have reduced the beneficial impact on yield of the introduction of the new varieties).

^{9/} G. Clark, 'A Study of Agricultural Credit Operations of the Cooperative Movement in The Gambia' ILO. See Bibliography.

- vacillating pricing policies. The history of producer groundnut pricing in The Gambia has been one of, initially, depressing farm price to provide national development funds, followed by a brief period of sharply escalating producer prices to encourage production, ending with the most recent policy of reducing producer prices to world price parity levels. These are price policies which have not engendered producer confidence in the groundnut business. At the second (or "middleman") level, government pricing policy has served to reduce competition for purchasing groundnuts from farmers and, thereby, reduced both the level of marketing services and producer prices. Through the GOTG policy of providing preferred treatment to the GCU on farm inputs and agricultural credit, lack of provision of working capital, and the setting of trader marketing margins which are a disincentive to participate in the groundnut collection trade, the private sector is being pushed inexorably out of the farm input and groundnut marketing business. The most cursory survey strongly indicates that groundnut farmers want to see the private trade in the farm input and groundnut marketing business to provide a competitive foil to the GCU.

- the role of the GPMB. From being a statutory groundnut export marketing board, the GPMB grew into a Government fiscal agent that was a de facto national development agency. A 1985 report on the Board's operations concluded that: "In every year since 1976/77, GPMB has transferred more resources to the government budget than would be required by a return on public capital invested in GPMB This has meant over-taxation of (groundnut) farmers, resulting in less than optimal (lower) production.^{10/} Notwithstanding recent GOTG initiatives to restrict the activities of the GPMB to groundnut marketing activities, the Board's new slimmer-line organizational look and the GOTG-GPMB performance contract, it is clear that the Board has been not the but, certainly, a part of the problem, along with others identified in this section, that have served to constrain the development of the groundnut sub-sector in The Gambia. The following section therefore examines in more detail the Board's operations and finances.

^{10/} An Economic and Operations Analysis of The Gambia Produce Marketing Board", USAID, 1985. See Bibliography.

3. AN OVERVIEW OF THE GPMB

3.1 Scope of Activities

GPMB was established in March 1973 "to provide for the regulation and control of the marketing and export from and import into The Gambia of produce and for matters connected therewith and incidental thereto." Since 1973, the range of GPMB's activities has narrowed considerably. The GPMB's main current responsibilities relate almost exclusively to groundnut marketing and may be summarised as follows:

- purchase of groundnuts through LBAs whose licences are subject to approval by the GPMB;
- appointment annually of a number of designated collection points as buying stations where the produce may be cleaned, weighed, bagged, etc.
- maintenance of depots throughout the country for storage of groundnuts;
- transportation of groundnuts from depots to decorticating plants and for processing, and onward transport to point of sale;
- processing of groundnuts;
- disposal of groundnuts and groundnut products on an exclusive basis for export and domestic markets;
- maintenance of quality control at all stages of marketing;
- assistance to the GOTG in establishing an annual producer price for groundnuts.

In addition to these activities, the GPMB operates two rice mills and a cotton ginnery. These operations involve the GPMB in setting producer prices for paddy rice and cotton, buying through LBAs, processing, sale of produce, and the importation of agricultural inputs for cotton (pesticides, fertilizer and seed cotton at an annual value of about 2 million Dalasis). The GPMB also provides storage for food aid received by the GOTG, for which it is reimbursed by government.

In relation to its major activity, groundnut marketing, it is interesting to list those functions which the GPMB does not undertake, which traditionally might be undertaken by a monopoly/monopsony crop marketing board:

- research;
- seed multiplication;
- extension;
- input supply;

- credit provision;
- crop purchase; and
- monopoly control of the domestic market.

3.2 Performance Contract

The GPMB signed a performance contract with the GOTG in December 1987. The current contract is for a three-year period, and the contract is now under review after the first year of operation. The contract sets both quantitative and qualitative targets to be met by the GPMB. GPMB's performance in meeting financial targets is examined below. The GPMB has effected a number of changes over the past year by adhering to the spirit of the performance contract. These include:

- completion of a staff audit resulting in manpower savings of 1 million Dalasis, which together with a similar retrenchment program in 1986/87 has produced total savings of 2.4 million Dalasis;
- closure of the GPMB construction and maintenance department and replacement by sub-contracting;
- sale of obsolete plant and stores items;
- sale of the Old Atlantic Hotel;
- introduction of a new Board organization and management structure;
- review, jointly with the NIB, of the marketing role performed by the GPMC.

These actions go some way towards meeting the qualitative targets specified in the performance contract. Areas where the Board has not fully complied are in the development of a three-year corporate plan (the preparation of the plan was interrupted by the recent NIB review and investigation) and divestment of operations not directly relevant to GPMB's groundnut marketing activities. Outstanding operations include the rice mill, the cotton ginery, and a number of investments and shareholdings in other SOEs and corporations (many of these, however, are non-performing and are difficult, if not impossible, to sell).

3.3 Overall Financial Performance

GPMB's past financial performance is summarised in Tables 5 and 6, which provide highlights of consolidated Board results and key financial ratios respectively for the period from FY 1982/83 to 1986/87.

TABLE 5

G.P.M.B. Summary of Consolidated Financial Position, FYs 1982/83 - 1986/87
(D 000)

<u>Balance Sheet</u>	<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>
Current Assets	40,460	57,418	36,849	39,544	43,538
Fixed Assets	50,118	53,599	57,984	84,688	213,584
Loans & Investments	12,854	17,711	20,426	20,546	9,796
Total Assets	<u>103,432</u>	<u>128,728</u>	<u>115,261</u>	<u>144,778</u>	<u>266,918</u>
Current Liabilities	115,389	110,262	112,888	113,776	83,745
Long Term Liabilities	11,056	16,704	22,276	54,400	62,366
General Reserve ^{1/}	(23,013)	1,762	(19,903)	(23,398)	120,807
Total Liabilities	<u>103,432</u>	<u>128,728</u>	<u>115,261</u>	<u>144,778</u>	<u>266,918</u>
<u>Profit and Loss</u>					
Sales Turnover	109,908	156,442	105,401	104,361	107,880
Operating Profit/(Loss)	(33,925)	27,405	(20,590)	(39,226)	(85,535)
Contributions from GOTG ^{2/}	(4,389)	(8,216)	3,192	57,573	118,855
Taxation & Extraordinary Items ^{3/}	(21)	5,518	(4,267)	(23,234)	(13,521)
Fiscal Profit/(Loss)	(38,335)	24,707	(21,665)	(4,887)	19,799
Reserves b/fd.	15,322	(23,013)	1,694	(19,971)	(24,859)
Reserves c/fd.	(23,013)	1,694	(19,971)	(24,859)	(5,060)
<u>Memorandum Items</u>					
Producer price groundnuts (D./tonne)	520	450	620	1,100	1,800
Equivalent Fob Price					
Groundnuts (D./tonne)	578	1,291	1,350	1,432	1,642
GPMB Purchases (tonnes)	127,486	92,908	45,826	49,094	67,879

Source: GPMB

Notes:

- ^{1/} Including capital reserves and reserve arising on consolidation; differs, therefore, from the profit and loss reserve figure.
- ^{2/} Price stabilization grant and produces price support; special grant of D62 million in 1986/87.
- ^{3/} Mainly foreign exchange gains/losses; for 1986/87 includes D13 million of GOTG debt written off.

TABLE 6

G.P.M.B. Financial Ratios, FYs 1982/83 - 1986/87

	<u>1982/83</u>	<u>1983/84</u>	<u>1984/85</u>	<u>1985/86</u>	<u>1986/87</u>
Working Capital	(74,929)	(52,846)	(76,039)	(74,232)	(40,207)
Current Ratio	0.35 to 1	0.52 to 1	0.33 to 1	0.35 to 1	0.52 to 1
<hr/>					
Sales Turnover					
Relative to:					
- Total Assets	1.06 to 1	1.22 to 1	0.91 to 1	0.72 to 1	0.40 to 1
- Receivables	9.06 "	4.99 "	5.08 "	4.86 "	6.99 "
- Inventories	5.04 "	4.49 "	7.67 "	6.46 "	4.21 "
- Working Capital	-	Negative	Working	Capital	-
- Fixed Assets	1.73 "	2.91 "	1.82 "	1.23 "	0.51 "
<hr/>					
Fixed Assets to					
Capital Employed	Infinite	30.41 to 1	Infinite	Infinite	1.77
Total Debt to Capital					
Employed	Infinite	72.06 "	Infinite	Infinite	0.79
Sales to Capital					
Employed	Infinite	88.79 "	Infinite	Infinite	0.89
<hr/>					
Operating Profit/ Assets	Loss	19 percent	Loss	Loss	7 percent
Operating Profit/ Sales	Loss	15 percent	Loss	Loss	18 percent

Source: G.P.M.B. Audited Accounts.

The figures up to 1986/87 present a familiar picture of an agricultural marketing parastatal in terminal decline. Reserves were exhausted by 1983/84, the last year when a profit was made. Continued producer price support exacerbated losses and added to negative net worth. All the ratios were catastrophic and pointed to an overasseted, illiquid and undercapitalized organization which was technically bankrupt.

Change occurred in 1986/87 with the reconciliation of the GPMB debt with the GOTG and the retirement of the substantial outstanding balance. At the same time, fixed assets were revalued which improved the appearance of the balance sheet.

For 1987/88, the GPMB has to meet the following financial targets under its performance contract:

- a profit level of D20 million, profit being defined as net earnings before interest, depreciation, and profits tax, but after the provision for excise duties has been made^{1/};
- a current ratio of 1:1;
- a limit to the increase in overhead of 10 percent or less of actual expenditure in 1986/87.

The GPMB profit and loss account for the first nine months of the fiscal year and balance sheet at the end of August 1988 are presented in Tables 7 and 8 respectively. As can be seen, profit before interest and depreciation appears to be on target. The figure relates to throughput by the end of August 1988 of 80 percent of the projected throughput. Therefore, GPMB's management is confident that the profit target level for the year of 20 million Dalasis will be achieved.

Actual overheads to the end of August 1988 were just short of D.13 million which compares to a budgeted figure of D.13.5 million and a previous year's figure at end of August 1987 of over D.15 million.

The ratio of current assets to current liabilities at the end of August 1988 was 1:1.33, a decline from the previous quarter (end-May) figure of 1:1.12. Three factors account for the short-fall:

- the sale of the Old Atlantic Hotel, for which D.7 million was projected as a cash inflow in March 1988, has been delayed. The impact of the sale will not now be reflected in the accounts until the final quarter;
- continued problems with GRTC transport capacity has severely delayed the planned crop evacuation schedule with concomitant delays in sales;

^{1/} Subject to revision if the underlying assumption on throughput levels changes.

TABLE 7

G.P.M.B. Trading & Profit & Loss Account for 9 months to 31 August 1988

	<u>D</u>	<u>D</u>
<u>TURNOVER</u>		<u>70,242,669</u>
<u>PRODUCE BUYING COSTS</u>		
Producer Price (Undec. G'Nut Del. T63320)		94,842,759
Buying Allowance		5,720,368
Transportation - Paid	3,697,291	
- Accrued	<u>423,509</u>	<u>4,120,800</u>
		<u>104,683,927</u>
<u>HANDLING/PROCESSING COSTS</u>		
Transit	1,384,222	
Depots	2,562,328	
Mills	1,073,622	
Oil Mill	<u>2,858,294</u>	<u>7,878,466</u>
		112,562,393
Movement in Stocks		(27,002,702)
Premiums/Penalties Net		(172,843)
<u>SALES (TONNE)</u>	<u>70,242,669</u>	<u>(70,242,669)</u>
		15,144,179
FAQ G'Nuts	16,463	31,194,678
Crude Oil	6,383	20,675,932
Refined Oil	1,631	10,055,716
Cake - Export	9,699	7,874,858
" - Local	393	248,840
Sludge & Sub-Std		
Crude	127	77,243
Seednut	58	<u>115,402</u>
Port Charges - Paid	1,415,034	
- Accrued	<u>630,196</u>	<u>2,045,230</u>
		17,189,409
Excise Duty		594,813
Export Duty		<u>6,845,132</u>
		24,629,354
General Overheads		3,753,943
Other Income/Expenses		(870,229)
Exchange Gains		<u>(5,006,571)</u>
Loss Before Price Subsidy, Interest & Depreciation		22,506,497
Proportion of Price Subsidy		<u>(39,300,000)</u>
Profit Before Interest and Depreciation		<u>(16,793,503)</u>
Interest		8,737,296
Depreciation		<u>3,750,000</u>
Net Profit for the Period		<u>(4,806,207)</u>
Reserve b/f		<u>691,122</u>
" c/f		<u>(3,615,085)</u>

Source: G.P.M.B.

TABLE 8

G.P.M.B. Balance Sheet as at 31 August 1988

	<u>31 August 1988</u>	<u>30 November 1987</u>
	<u>D</u>	<u>D</u>
Fixed Assets	211,225,473	212,066,000
Investment in Subsidiaries	4,100,016	4,280,007
Amounts due from Subsidiaries		2,866,126
Loans and Investments	<u>7,795,688</u>	<u>9,795,688</u>
	<u>223,121,177</u>	<u>229,007,821</u>
 <u>Current Assets</u>		
Amounts due from subsidiaries	6,672,782	
Stock on Hand & in Transit	50,658,059	24,180,523
Sundry debtors & prepaid charges	9,951,613	13,913,969
Cash and bank balances	<u>297,376</u>	<u>925,572</u>
 <u>Current Liabilities</u>	<u>67,579,830</u>	<u>39,020,064</u>
Short term loans payable	4,523,432	3,826,583
Trade creditors & accrued charges	2,352,586	1,856,966
Bank Overdraft	<u>82,923,046</u>	<u>25,681,636</u>
	<u>89,799,064</u>	<u>31,365,185</u>
 Net Current Assets (Liabilities)	 <u>(22,219,234)</u>	 <u>7,654,879</u>
	<u>200,901,943</u>	<u>236,662,700</u>
 Represented by:		
Capital Reserve	124,140,185	124,140,185
General Reserves	3,615,085	(691,122)
Loans payable - long term	62,446,673	63,213,637
Advance (Producer Price Subsidy 1987/88)	<u>10,700,000</u>	<u>50,000,000</u>
	<u>200,901,943</u>	<u>236,662,700</u>

Source: G.P.M.B.

- interest charges arising from these two adverse outcomes.

It is clear that considerable progress has been made in normalizing the GPMB's financial position under the aegis of the performance contract. The much wider issue of GPMB's operational efficiency is dealt with in the following sub-section.

3.4 Individual Operations

Of all the operations undertaken by the GPMB - storage, transport, decortication and processing - processing is by far the most important. What follows, therefore, is heavily concentrated on the Denton Bridge complex which accommodates one of the GPMB's two decorticating units and the oil mill.

3.4.1 The Oil Mill Complex

A. The Physical Plant

The oil mill complex at Denton Bridge comprises two separate facilities intersected by the main road to Banjul.^{1/} The south-side facility incorporates the transit station for the reception of groundnuts, the decortication plant and the power plant. The north-side of the site contains oil mill #1 and the now, unused oil mill #2.

The transit station receives 70 percent of the marketed crop but it could handle more of it. The decortication plant has a capacity of 450 tonnes of undecorticated groundnuts if operated on three shifts per day. The power plant (see Annex 7 for a more detailed discussion) was inaugurated in February 1988 as a part of a phased expansion which ultimately envisaged Denton Bridge decorticating and crushing between 110,000 and 120,000 tons of groundnuts per annum (33,800 tonnes were processed in 1987/88.) The two boilers are fired with groundnut shells and provide a steam-generating capacity far in excess of the oil mill's requirements (potentially 2.6 MW versus an existing mill power demand of 0.6 MW). The new turbo-generator has a capacity of 1.5 MW but the power plant was designed for the later addition of another 1.5 MW set. At the same time there is an idle 0.7 MW turbo-generator in the oil mill compound which could be recommissioned. The GPMB has had discussions with the GUC to feed this excess capacity into the national electric grid. There is a proposal to supply the required potential relays and synchronization gears at an estimated cost of 510,000 Pounds Sterling. The GPMB and the GUC apparently cannot agree as to who should pay this cost and at what price the energy will be supplied to the GUC. In the meantime, the underutilization of this valuable asset costs the economy approximately 500,000 US Dollars per annum in diesel fuel burnt.

A bridge spans the road between the two sections of the plant, supporting a conveyer belt with a capacity of 400 tonnes per day of kernels, steam at 18 kg., and a power cable.

^{1/} What follows is a summary of a more detailed description of the physical plant as presented in Annex 6.

The oil mill #1 comprises three separate press lines (cookers and presses operating in two stages), with a total capacity of 210 tonnes of kernels per day (equivalent to 300 tons of undecorticated groundnuts), which could produce 43.5 percent oil and 55.5 percent cake, with 1 percent milling losses. In practice, the oil mill rarely runs at nominal capacity. Recent capacity utilization of the oil mill is shown below:

<u>Year</u>	<u>Throughput of undecorticated groundnuts (tonnes)</u>	<u>Number of days to process at nominal capacity</u>
1982/83	39,175	131
1983/84	43,071	144
1984/85	20,192	67
1985/86	21,959	73
1986/87	35,920	120
1987/88	33,800	113
1988/89 (estimate)	34,340	114

Source: GPMB records.

The plant has two refineries. The new refinery has a capacity of 20 tonnes per day (three shifts per day). The old refinery is no longer in operation; the vacuum system has been cannabilized and the cooling system, which used sea-water, has corroded. The refined oil is stored in seven tanks with a capacity of 100 tonnes each. There is also a rudimentary bottling plant, consisting of a manual filler located above a scale and a manual capsuling machine to fill one liter bottles.

Finally, there is re-useable equipment in the old oil mill #2. Most of this is press equipment, but there are also three decorticators which with four (identical units not used in oil mill #1 could duplicate the decortivating capacity at the transit station.

B. Production Efficiency

The plant was not in operation during the time of this study. Therefore it is difficult to comment upon production efficiency. One basic problem at the plant is the almost complete lack of accurate recording of product flows at each processing stage. Discrepancies in throughput amounts cannot, therefore, be reconciled (see, for example, the oil mill account for 1987/88 operations presented in Annex 8). Reported and actual losses at each process stage are discussed in Annex 6.

C. Operation Costs

Oil mill operation costs are summarized below:

<u>Year</u>	<u>Operation Costs</u> <u>(D. Millions)</u>	<u>Dalasis Per Tonne</u> <u>Uncorticated Throughput</u>
1982/83	2.7	70
1983/84	2.6	61
1984/85	3.3	161
1985/86	3.9	179
1986/87	4.1	114

Source: GPMB records.

As is to be expected, unit costs fluctuated in line with capacity utilization. Mill costs are arguably now more variable than for the period shown when fixed costs ranged from 25 to 30 percent of total costs. What should be stressed, however, is that costs allocated to the mill do not represent the full costs of operation. This applies to the allocation of management costs (see below), depreciation and interest. Recorded mill costs are therefore partial. The budget for the mill for 1988/89 is just over D.3 million or approximately 18 US Dollars per tonne of projected decorticated throughput. A typical full press operation in the USA would operate at a cost of about 18-22 US Dollars per tonne, but this would include full provision for staffing, depreciation and working capital requirements.

D. Areas for Efficiency Improvements

Specific proposals for improving the efficiency of the mill's operation are presented in Annex 9. They are grouped into 5 areas: quantity, quality, energy, communications and maintenance. Improvements in output/input ratios require more careful weighing and monitoring of product flows. Material losses could also be reduced by welding chutes, tightening all flanges and replacing packaging. The main recommendations on improving product quality is the need to update laboratory equipment and expedite analysis in all intermediate sections of the plant. Energy efficiency improvements basically relate to more efficient utilization of the power plant. Recommendations for improved communications follow from the lay-out of the Denton Bridge site and the production problems caused by this. Finally, it is recommended that all maintenance procedures are reviewed, particularly the rebuilding of mechanical press shafts and worms, which is not currently done. To undertake the work would require an up-dating of the workshop equipment but the savings in current foreign exchange expenditure on spare parts would be considerable.

E. Manpower Levels

Mill manpower levels are detailed in Annex 10. Compared to USA or European standards, the plant is definitely overstaffed. But the plant lay-out is such that the great distances between sections

force duplication of many functions. This is particularly true for the maintenance teams where the responsibilities of the shift maintenance teams, the maintenance detail and power plant maintenance teams overlap.

It should also be noted that several functions normally included in an oil mill organizational structure (see, for example, Annex 11 which presents UNIDO guidelines for the organization and management of an oil mill) are missing, including commercial and financial personnel and the post of store-keeper, who would also handle spare parts distribution. These functions are covered by other departments within the GPMB. As a result, the mill is more over-manned than it would initially appear to be.

One way to reduce personnel in the mill would be to improve communications between supervisory and operational staff. For example, walkie-talkies are not used, so one section of the plant is not aware of any problems which might be occurring in another section. If, for instance, power is about to fail for lack of hulls from the decorticating plant, the operators of the press need to be made aware of this in order to start opening the machines to prevent the "freezing" of the materials inside. A similar argument holds for any problems in the long conveyor belt system.

F. Management Capability

Extensive contact with oil mill staff during the oil mill consultant's fieldwork was limited to the Chief Engineer and the Senior Processing Engineer. In addition, the plant was under maintenance and it was not possible to assess management capability under actual operating conditions. Nevertheless, both the Chief Engineer and the Senior Processing Engineer seem to have a good knowledge of the overall operations of the plant. However, they could have more oil mill crushing experience. This amounts almost to having a "sixth sense" about processing, because oil mill processing is as much an art as it is a science. Exchanges with counterparts in Senegal and attendance at processing seminars, such as the one organized by Texas A & M University at the Food Protein Research and Development Center, would help to rectify this lack of crushing expertise.

G. Processing Economics

Accounts are produced for the oil mill, but are of little value operationally because the imputed cost of groundnuts for processing is derived from the producer price plus buying allowances, transport and handling charges. The cost of subsidizing producer prices is therefore passed on to the mill and, not surprisingly, the mill shows an accounting loss.

The decision over whether to process or export decorticated groundnuts is made by the GPMB senior management. Prior to the buying season, the Board budgets for a 50:50 split. This is then adjusted as the season progresses in line with relative world prices for groundnuts and products. The GPMB provides market intelligence

and the GPMB subscribes to the Public Ledger. It is not clear, however, how rigorously this approach is applied in practice. There do not appear to be formal procedures within GPMB for assessing its performance in maximising prices realised.

The disposition of groundnuts for FYs 1981/82 to 1987/88 is shown in Table 9. As would be expected, the groundnut/product mix varies considerably from year to year. It is, however, heavily weighted towards oil and cake export sales (typically 40 to 50 percent of export sales). For value to be added by processing, the weighted product price has to exceed the groundnut price. Formally:
(out-turn efficiency of oil X unit price of oil) + (out-turn efficiency of cake X unit price of cake) / (unit price groundnut) > 1.

Based on efficiencies for oil and cake of 43.5 and 55.5 percent respectively and fob prices realized for faq groundnuts, crude oil and cake, out of the last 9 years, 1978/79 to 1986/87, the weighted product price has only exceeded unity in 1983/84, the year when the Board made a profit on both its groundnut and product trading accounts. In all other years (with the exception of 1978/79 when the weighted price was equal to unity), GPMB was losing net revenue by processing groundnuts for export before the costs of processing were taken into account.

Moreover, the prospects for export sales of groundnut products are not promising. The latest World Bank projections (see Annex 4) suggest a marginal improvement in real weighted product prices in the long term (U.S. \$ 212 per tonne in 1988 for composite nut versus U.S. \$ 217 per tonne in 2000 in constant 1985 prices). A further aspect of crude oil groundnut marketing overlooked in previous reports is that although the Gambia's level of marketed output is negligible in terms of world production, it is substantial in relation to groundnut oil traded internationally. This follows from the policy of large producers and consumers, such as India and China, to become self-sufficient in edible oil production. Thus in 1987, despite a world consumption level of 3.35 million tonnes, only 380,000 tonnes of groundnut oil was traded. Of that amount, 274,000 tonnes went to the EEC. Again, EEC market prospects are not encouraging. As production of oilseeds exploded in the EEC in the 1980s, one of the most rapidly growing oilseeds was sunflower seed. Sunflower seed oil has many of the cooking characteristics found in groundnut oils. EEC - produced sunflower seed oil also sells at a substantial discount to groundnut oil and has proved extremely competitive as a substitute.

As is evident from Table 9, the GPMB also sells groundnuts and products into the domestic market. Hand-picked groundnuts have now been discontinued and the two main products are refined oil and cake, particularly the former. Quantities sold vary from year to year but average around 2,500 tonnes per annum (this is the level of sales GPMB is projecting for the forthcoming season).

Refined oil prices are currently at a considerable premium to crude oil prices as shown below:

TABLE 9

G.P.M.B. Purchase and Dispositions of Groundnuts, 1981/82 to 1987/88^{1/}

	1981/82	1982/83	1983/84	1984/85	1985/86	1986/87	1987/88
Delivered purchases (undercorticated)	81,942	127,486	92,908	45,826	49,094	67,879	63,320
Disposition	81,942	127,486	92,908	45,826	49,094	67,879	63,320
Export Sales	<u>49,700</u>	<u>75,867</u>	<u>54,824</u>	<u>31,089</u>	<u>35,022</u>	<u>34,600</u>	<u>45,581</u>
Decorticated FAQ groundnuts	35,100	51,725	27,796	14,772	15,794	18,663	16,463
Decorticated HPS groundnuts	1,100	3,292	2,138	1,445	877	503	-
Oil	7,700	10,497	11,330	4,355	4,548	6,064	11,949
Cake	5,800	10,353	13,560	10,517	13,803	9,370	17,169
Local Sales	<u>3,850</u>	<u>3,197</u>	<u>6,611</u>	<u>4,895</u>	<u>4,074</u>	<u>2,810</u>	<u>2,594</u>
Oil	1,800	3,126	2,345	2,562	2,488	1,985	2,143
Cake	50	-	-	2,327	586	821	393
Seednuts	2,000	71	4,266	-	997	-	58
HPS	-	-	-	6	3	4	-
Wastage in Shelling/Processing	23,952	37,551	27,766	15,970	16,255	19,522	24,645
Sundry Losses and Wet Nuts	840	391	1,136	850	615	648	-
Changes in Stocks of Oil, Cake & Nuts	3,600	10,480	2,571	(6,978)	(6,872)	10,299	(9,500)

^{1/} To 1984/85: October-September
 1985/86: October 1985 - November 1986
 From 1986/87: December 1986 - November 1987

<u>Year</u>	<u>Crude oil prices</u> <u>fob (D/tonne)</u>	<u>Refined oil</u> <u>prices (D/tonne)</u>	<u>Premium/</u> <u>(Discount)</u> (%)
1982/83	1262	1702	35
1983/84	3800	2316	(39)
1984/85	3943	2300	(42)
1985/86	4046	4340	7
1986/87	3560	6282	76
1987/88 <u>1/</u>	3239	6165	90
1988/89 <u>2/</u>	3694	6805	84

Notes:

1/ Actual prices realised for first 9 months of FY.

2/ Budget figures.

Source: GPMB records

The analysis of crushing margins presented below is based on prices realised for the first 9 months of FY 1987/88 and indicate the substantial gains available from refining.

Crushing Margins

<u>Cost of groundnuts</u>	<u>US \$ 1 day</u> ^{1/}
(at fob opportunity cost and plant capacity of 210 tonnes of kernel per day)	(57,259)
<u>A. Without refinery</u>	
Producing: 91.35 tonnes crude oil (43.5% efficiency)	42,573
116.55 tonnes cake (55.5% efficiency)	<u>13,617</u>
Total	56,190
Gross crushing margin	(1,069)
<u>B. With refinery</u>	
Producing: 70 tonnes crude oil	32,623
20 tonnes refined oil ^{2/}	16,854
116.55 tonnes cake	<u>13,617</u>
Total	63,094
Gross crushing margin	5,835

Notes:

1/ At US \$1.00 equals D.6.95

2/ 5 percent refining loss

Source: Consultants' calculation.

Since incremental refining costs are not substantial, the figures show the critical importance to oil mill financial viability of

maximising refined oil sales. A more detailed analysis of gross crushing margins based on actual GPMB sales mix (both export and local) from 1982/83 reveals that the margin has been negative with the exception of the current year when relative prices are such that value added from processing will probably cover direct oil mill costs but would not be adequate to meet depreciation and interest costs.

The GPMB sells most (95 percent) of its refined oil on an ex-mill basis in drums of 200 liters. The remainder is distributed through retail stores and supermarkets in 1 liter plastic bottles. GPMB management has not undertaken any detailed research on the local market for oil, but it is generally considered to be limited. The initial projected sales figure for 1987/88 of 2,500 tonnes, for instance, has recently been reduced to 2,143 tonnes.

Competitive brands of edible oil are available in the Gambia. In one downtown supermarket four manufacturers' brands (English and French) were on sale at prices per liter far in excess of GPMBs brand, Sarro (127 percent higher in one case). The store management considered that Sarro was a popular oil and the store had no problems in handling it, except for the quality of the plastic bottles.

Attempts were made to obtain reliable statistics on edible oil imports into the Gambia. Two sources were tried with variable success. It is, however, clear that there was a large increase in imports in 1986/87 in value terms, which cannot entirely be accounted for by the devaluation of the Dalasis. Subsequent data obtained from CSD indicated a level of imports in 1986/87 of approximately 1,500 tonnes. If the GPMB could capture this market, the oil mill would show profitability (see the sub-section below on oil mill valuation). The question of whether or not the local market could absorb circa 4,000 tonnes of refined oil per year requires more investigation before it can adequately be answered.^{1/}

H. Development Options

As detailed in Annex 6, the expansion of plant processing capacity is technically not a problem. However, from a commercial view-point increased throughput is not justifiable if incremental output is in the form of crude oil and cake. The likely local and regional market for higher-priced refined oil places an upper limit on throughput levels.

^{1/} Consumption rates of edible oil in industrialised countries are typically about 23kgs/ per capita/ per annum. Comparable figures for Latin America are 12-15 kgs/p.c./p.a. Given the local availability of oilseeds, a fairly high figure for the Gambia of 8 kgs/p.c./p.a. could be assumed. With a total population of 0.7 million, this indicates annual consumption of only 5,600 tonnes, a large part of which would be produced at the village level. It may, therefore, be necessary to consider the wider regional market.

Even at the current mill capacity, consideration could be given to improving capacity utilisation by processing other oilseeds. The processing of sesame seed, for instance, does not present any major technical problems (see Annex 12). There would, however, be problems in processing the cotton seed which GPMB currently exports. Delinting and decorticating white cotton seed is expensive and would require dedicated machinery. Conversely, processing white cotton seed with lints and hulls is not recommended, since it produces a highly colored oil and a low value feed.

The other two options available are solvent extraction and further refining of crude oil. With solvent extraction the crude oil yield is increased to approximately 48.65 percent. Conversely, cake yield falls to 51.35 percent of kernels processed. Based on prices realised in 1987/88, marginal revenue would amount to approximately U.S. \$19 equivalent per tonne of kernel processed. The marginal cost of solvent extraction is estimated at about U.S. \$3 per tonne of kernel processed, yielding a net incremental revenue of U.S. \$16 per tonne. A solvent extraction plant with throughput capacity of 300 tonnes kernels per day would currently cost U.S. \$ 1.5 million. An expected 20-year life and a requirement for a real rate of return to the investment of 10 percent would imply an annual annuity contribution of U.S. \$176,200. On an annual throughput level in excess of 11,000 tonnes per annum of kernels, therefore, it would appear that solvent extraction would be an attractive investment. The above calculations however, are based on incremental costs and revenues. They assume that the existing mill operation is viable. As has been shown, the oil mill will continue to make losses unless a larger proportion of mill output is marketed in the form of refined oil. A computation of gross and net crushing margins for a solvent extraction plant shows that viability would require increased refinery throughput. An additional consideration with a solvent extraction plant is the hazard of using explosive chemicals and the stringent safety control procedures required.

Another area for consideration would be to look into the replacement of the outdated present refinery by a modern 100 tonnes per day continuous physical refinery. Energy is freely available to GPMB. The production of refined oil using the process of physical refining (deacidification combined with deodorizing at high temperature and under high vacuum) could, therefore, be used.

This process would produce a top grade refined and deodorized oil using:

- high temperature steam at 18 ATV as a source of heating to the desired refining temperature;
- pressure reduced steam at 10 ATV for motive steam of the operation of the refinery;
- low pressure steam for steam injection.

The only chemicals needed in the operation would be phosphoric acid (0.1% in weight of oil) and bleaching clays (1% in weight of oil), plus citric acid to stabilize the exported oil.

This oil could be sold either as finished or as semi-finished product in the neighboring countries but also to Europe or the Caribbean Islands and possibly Venezuela, where peanut oil is still considered as the prime cooking oil and is always difficult to obtain.

The cost of a 100 tonne a day steam refinery, including pretreatment and bleaching, would be approximately U.S. \$2 million, of which U.S. \$1 million would be for the processing equipment, U.S. \$0.5 million for the cooling tower/building, and U.S. \$0.5 million for the installation.

This strategy of exporting finished or semi-finished product, when energy inexpensive energy supplies are available, is currently being followed by Malaysia with its palm oil exports. There the energy used in the process is from co-generation units burning the spent fibers from palm oil crushing. The required investment of US \$ 2 million, on the assumptions used for a solvent extraction plant above, would require annual additional revenues of U.S. \$235,000 approximately to be justifiable. Given a processing throughput of between 25,000 and 35,000 tonnes of kernel per year, this implies a required increase in prices realised for semi-refined oil as a result of further refining of between U.S. \$15 and 22 per tonne. Clearly, some more detailed investigation of the market for semi-refined oil would be necessary before deciding upon the financial attractiveness of a steam refinery.

Mill Valuation

A definitive valuation of the current mill operation presents certain problems. Certainly in terms of historical profitability the oil mill would have very little value to a potential investor.

As part of its capital restructuring program, the GPMB commissioned a valuation of the mill in mid-1987. The valuation was based on the principle of a depreciated replacement cost value (see Annex 13) and valued the whole mill complex at D.70 million, of which total the mill itself was valued at D.13 million, the power plant at D.28 million and the transit depot, including the conveyor system and associated equipment, at D.29 million.

To the extent that the mill has not succeeded in adding sufficient value through processing to cover its overhead and operating costs, an alternative to the above would be a valuation based on resaleable assets. There is an active market internationally for second-hand oil mill equipment and the valuation presented at Annex 14 considers only that equipment in oil mills 1 and 2 which could be resold. Hence, for the bridge and conveyor system, only the conveyors themselves are considered; plant structures and buildings are not deemed to have a resale value. The resultant total is D.19 million, of which the power plant is considered to have a resale value of D.12 million.

The two valuations suggest the range between two extremes: on the one hand, a replacement cost valuation of all the equipment at the Denton Bridge site, much of which is grossly underutilised and surplus to actual processing requirements; and, on the other hand, a liquidation value in the event that groundnut processing were discontinued.

The preferred approach to valuing the oil mill would be on a discounted cash flow basis: that is, the future income stream which the oil mill generates discounted at a suitable rate to reflect risk and the level of return required to justify the investment.

A simple cash flow model was, therefore, prepared using GPMB's 1988/89 budget data for quantities of groundnut to be processed, product out-turns, overhead and operating costs, and projected prices.^{1/} Based on GPMB's assumptions, revenue generated only just covered operating and administrative costs. The underlying model assumptions were, therefore, amended as follows:

- the production of refined oil was increased from 2,500 to 4,000 tonnes. As discussed above, this may be the upper limit for the domestic market to absorb;
- depreciation was included as a straightline figure over 20 years, based on the current cost of a new full press plant with a capacity of 300 tonnes a day of U.S. \$2.5 million;
- interest charges were also applied, based on a three months working capital requirement for purchasing groundnuts valued at fob minus the boards projected port and shipping costs;

Costs and revenues were projected in constant 1988/89 prices over a 20-year period. Latest product price projections (see Annex 4) suggest that prices will be maintained in real terms, although clearly annual variations will occur. A discount rate of 10 percent was applied to the resultant cash flow (inferring a required real rate of return of 10 percent, which is probably the minimum a potential investor would require), yielding a net present value of D. 14 million. On an anticipated future income stream basis, therefore, the mill as presently operated would be worth U.S. \$2 million approximately.

3.4.2 Transport

About 70 percent of oil groundnuts are transported by river by the GRTC, a wholly-owned subsidiary of GPMB (the remaining 30 percent

^{1/} Using one year's price data for projection purposes is obviously a gross simplifying assumption. One of the problems of modelling the mill's future costs and revenues, however, is that there is no authoritative source for long-term groundnut price projections. The World Bank projects product prices and a "composite" groundnut price, but the latter is derived from the former.

are transported by road and delivered directly to the decorticating plants by the buying agents). GPMB has a road transport fleet of 39 trucks and 20 tractor/trailers. This is used for the final movement of groundnuts and products in Banjul and for staff transport. A recent study of GPMB's road haulage departments found that the fleet was poorly managed.^{1/}

The problems of GRTC are more fundamental. Financially, GRTC depends completely upon the Board, since it operated exclusively for the Board last year. The level of tariff the Board has agreed with GRTC has not in the past met GRTC's costs and has been inadequate to allow for the repair and maintenance of tug boats and lighters. GRTC's operating losses were D. 0.1 million in 1984/85, D1.7 million in 1985/86, D0.5 million in 1986/87, and the trial balance at the end of September this year indicates another large loss. The parlous state of GRTC's finances is aggravated by GPMB taking 25 percent of its weekly earnings to pay off its outstanding debt to GPMB. An overdraft facility with GCDB takes another 35 percent of revenue.

Of GRTC's 33 barges, 10 are currently out of operation. All 3 tugs have broken down and the company has been forced to use a small vessel (the Macina) to transport lighters. As a result, 8,000 tonnes of groundnuts that should have been evacuated by July at the latest are still up-country (3,000 tonnes at Basse, 3,000 tonnes at Bansang, and about 2,000 tonnes at Kudang).

The study cited above recommended that the problems of GRTC and of GPMB's transport department would best be resolved by integrating the GRTC into an enlarged transport service department within GPMB. Apparently this suggestion has been rejected by GOTG, which wishes to rehabilitate GRTC as a matter of urgency prior to reviewing its status.

3.4.3 Decortication And Depot Operations

The operations of the decorticating plant at Denton Bridge are detailed in Annex 6. The decorticating plant at Kaur has a slightly higher capacity than Denton Bridge, reflected in its higher utilisation level, as indicated below:

^{1/} GOPA Study (See Bibliography)

Decorticating Plants

<u>Year</u>	<u>Banjul</u> <u>(Denton Bridge)</u>			<u>Kaur</u>		
	<u>Total Costs</u> <u>Of Operation</u> <u>(D. Million)</u>	<u>Tonnage</u> <u>Handled</u> <u>(Decorti-</u> <u>cated)</u>	<u>Cost/Tonne</u> <u>(D.)</u>	<u>Total Cost</u> <u>Of Operation</u> <u>(D. Million)</u>	<u>Tonnage</u> <u>Handled</u> <u>(Decorti-</u> <u>cated)</u>	<u>Cost/</u> <u>(D.)</u>
1986/87	0.6	2085	290.31	0.8	12882	70.54
1985/86	1.0	5531	173.4	0.9	12596	72.26
1984/85	0.8	6931	112.42	1.0	11818	83.77
1983/84	0.7	11359	60.64	1.0	19305	50.25
1982/83	0.7	23596	30.35	1.0	39566	27.60

Source: GPMB

Recent figures for Banjul show the impact on unit costs of low capacity utilisation, despite efforts by GPMB to reduce fixed costs by using contract labour etc. From figures provided by GPMB management on conservative throughput rates for the two units (2,200 tonnes and 1,600 tonnes per week for Kaur and Denton Bridge respectively), the forecast crop for the forthcoming season could be decorticated in just 18 weeks, and it is likely that throughput time could be reduced by a third if required. This raises the issue of decorticating plant rationalisation, particularly in view of the advantages of Denton Bridge using shell waste to maximise the output of the boilers, and the unused decorticating equipment at oil mill #1.

Operational costs from the 7 depots outside Banjul are summarised below.

<u>Year</u>	<u>Total cost</u> <u>(D. million)</u>	<u>Tonnage</u> <u>handled</u> <u>(undecorticated)</u>	<u>Cost/tonne</u>
1986/87	3.3	49318	68.60
1985/86	4.8	35979	134.03
1984/85	4.2	31074	96.92
1983/84	3.6	69186	58.87
1982/83	4.1	87363	40.92

As with decortication unit cost, variability relates to tonnage handled. Figures for the Banjul and Kaur depots show a similar trend. GPMB has had some success in reducing fixed costs at depots with the introduction of contract labourers (labourers are currently paid D.3.69 per tonne handled). The depots are all reported to be in good condition (a previous depot was critical of the large capital program of depot improvement) and require little logistical support: all transportation from depots in the provinces is by barge.

3.5 Conclusions

The performance contract is to be welcomed as a step in the right direction towards increased GPMB efficiency. It has focussed GPMB's attention on its primary concern which is groundnut marketing. With a duration of three years, further improvements in the cost efficiency of GPMB's operations can be expected. The contract has allowed the Board's finances to be regularised; and it has, finally, established a working relationship between GPMB and government by allowing GPMB the level of autonomy required to manage its business, while assuring GOTG of Board accountability.

There is, however, nothing in the performance contract which guarantees maximisation of output from resources used; that is, no mechanism exists for targeting and measuring value added. The contract specifies targets such as profit level. The Board can always meet such targets as long as its assumptions concerning throughput, prices, and Board expenses are suitably conservative, since the residual in the calculation of a predetermined level of GPMB profit will always be the producer price level; in effect, GPMB can always pass on its costs through to groundnut farmers. The performance contract specifies maximum levels for overhead cost increases, but there are no independent criteria for assessing whether or not initial costs were reasonable. The tendency will always be for GPMB to apply for the maximum recovery of its cost escalation. With the removal of producer price subsidies in 1989/90, there is a danger of a vicious circle of low producer prices leading to low marketed output, leading to even lower producer prices as GPMB is unable to commensurately reduce its overhead, spiralling into ever decreasing producer prices and output as the Board overhead becomes an increasingly higher proportion of sub-sector income.

This absence of an appreciation of the concept of value added is nowhere more evident than in GPMB's management of the mill. The oil mill has run almost consistently at a loss. Substantial capital investment decisions have been made (e.g. the power plant) and more are at the planning stage (e.g. solvent extraction and detoxification plant). Capital investment decisions appear to be characterised by a complete lack of commercial consideration. GPMB management, generally, is production-oriented and is weak in strategic thinking. In the case of the mill, this is reinforced by a split between mill management and control over the disposal of products. The GPMB does not monitor the performance of the mill in adding value, although earlier studies strongly recommended the introduction of the principle of opportunity costing for groundnuts supplied to the mill. This lack of a market orientation is disturbing since its inculcation is not something that can readily be built into a performance contract.

4. PRIVATIZATION AND THE GPMB

4.1 Government policy

Overall Government policy towards the groundnut industry reflects GPMB's mandate and aims to secure the following two objectives:

- maximization of producer prices;
- maximization of foreign exchange return to the economy.

In trying to achieve these two objectives, the one variable most susceptible to government control (apart, that is, from direct producer price subsidies) is the efficiency of groundnut marketing and processing. As a result, government measures to date include:

- the introduction of a performance contract between GOTG and GPMB;
- the rationalisation of the interlocking debts between the GOTG, GPMB and CBG;
- the equalisation of marketing margins paid to licensed buying agents in order to encourage private participation in produce marketing.

At the same time, GOTG, under the auspices of the NIB, is implementing a national plan for the restructuring and rationalization of public enterprises (see Annex 15 for details of progress to date and future planned actions). The parastatal sector in The Gambia includes: 9 wholly-owned public enterprises, primarily in the utilities, transport and communications sectors; the GPMB; 5 wholly-owned financial enterprises; and, 7 mixed enterprises with partial Government ownership (mainly hotels.). Non-financial public enterprises account for 25 per cent of modern sector employment. The sector is dominated by the GPMB, which accounts for 85 percent of export earnings, 50 percent of aggregate public enterprise revenue, and 30 percent of total public enterprise assets.

Changes effected within GPMB under the terms of the Performance Contract have already been discussed in Section 3 above. From discussions held with NIB officials, future policy towards the GPMB will be guided by the concept of "core activities" - i.e., those related to groundnut purchasing, processing and marketing. Any other activities are to be regarded as peripheral and, by definition, candidates for divestiture. Both GPMB's rice milling operations and its cotton ginnery are, therefore, currently under review for eventual disposal. More significantly, even within the Board's core activities the NIB has expressed concern over the economics of the oil mill. At the same time, the privatization of GRTC is being considered, once it has been rehabilitated and its relationship with GPMB formalised. Finally, NIB, in conjunction with GPMB, has conducted a study of the Board's external marketing subsidiary, GPMC. Although a final decision has not been made, it is understood that GPMC's scope of activities and commercial presence in the U.K. are likely to be reduced.

Government's desire to maintain the core, or strategic, operations of the GPMB under its control undoubtedly reflects the dominant position of the groundnut industry in agriculture and the national economy, not least as the major source of foreign exchange.

In the remainder of this section, the possibilities of increasing private sector involvement in GPMB's key activities will be explored. The necessary preconditions for successive private sector participation are discussed. The potential gains and losses from privatizing Board activities are outlined. Finally, the major concerns and issues that discussion of privatization provokes are dealt with.

4.2. Privatization climate

There are a number of preconditions that have to be met if any privatization measure is to stand a chance of success:

- the general economic environment should be favorable to private sector involvement;
- private sector firms need to exist which are interested in assuming responsibility for operations to be divested and are capable of running them;
- margins within the sub-sector should allow for profitable operation;
- financial institutions must be capable of channeling adequate levels of finance to the private sector.

Each of these issues is discussed below.

Economic environment

Privatization initiatives can become exercises in sub-optimisation if the general economic environment is not favorable. Where governments maintain fixed, overvalued exchange rates, for instance, private sector participation in export-oriented industries is problematic. Second best solutions such as export earnings retentions can be applied, but are cumbersome. Fixed exchange rates generally encourage foreign exchange leakages, particularly where transfer pricing is possible. Similarly, extensive price controls make it difficult for private firms to operate profitably. Finally, legislation heavily biased in favour of organized labour denies private organizations the perceived level of managerial autonomy for successful business operations. In these respects the Gambia presently stands out as a paradigm of a favorable climate for private sector participation.

In early 1986, for instance, the government introduced a flexible exchange rate system based on an interbank market. As a result, the parallel market which had thrived since 1982 became moribund as the supply of foreign exchange through official channels increased.

Floating the currency resulted in an initial depreciation (January to August 1986) of approximately 100 percent. Since then the currency, assisted by high real levels of interest, has stabilized within a fairly narrow range. The success of the measure is attested by the vote of private sector confidence in the new system, as evidenced by so many CFA francs being redeemed for Dalasis at the Banks that the money supply ceilings were actually exceeded in early 1987.

At the same time, all government controls on prices of foodstuffs have been eliminated and import duties were reduced by between 5 and 30 percent in mid-1986 on items important to the re-export trade. These particular policy measures are cited as examples only of the substantial changes effected by the government under the ERP which are designed to create, and have created, a favorable environment for private sector initiatives.

Business enterprises in the Gambia

The business milieu in The Gambia comprises a private sector that is dominated by small and medium-scale enterprises (SMEs) and a public sector that, while of major economic importance, is less pervasive than in many other West African countries.

The SME sector accounts for about 50 percent of GDP.^{1/} The 1981/82 National Income Estimates indicate that there are 9,400 formal sector SMEs (5-50 employees) in The Gambia. Manufacturing SMEs play a limited, but growing, role in the economy (contributing about 7 percent of GDP). Trading, other services, tourism, construction and fishing, as in many African countries, are the most important SME activities. Employment surveys undertaken each December show that formal private sector SMEs accounted for about one-third of the 22,000 total formal sector employment in December 1986 (with SME manufacturing and processing providing less than 1,000 jobs in total.).

SMEs in The Gambia are mostly owned, managed and operated by private Gambians, unlike the large enterprises which are often owned by Government, or are joint ventures with foreign ownership, especially by Ghanaian, Nigerian and Sierra Leonean entrepreneurs in restaurants, fish processing and retail and re-export trades.

SMEs in The Gambia are characterized by their lack of structured and well established management and organization, by the weakness and sometimes complete absence of accounting systems, and by the informality of their operations which are sometimes mixed up with family or religious considerations. Many of them, therefore, need advice on how to upgrade their management, organization and

^{1/} Condensed from IBRD, 'Staff Appraisal Report. Enterprise Development Project', May 1988, P.3-7.

production techniques in order to improve their general performance. Another general characteristic, especially of the smaller enterprises outside Banjul, is their difficulty in gaining access to appropriate technology, to the markets of the main urban areas on account of poor transport, and lack of access to bank credit. Nonetheless, their ubiquity is indicative of their ability to survive and the continued demand for their products and services. Successful SMEs in The Gambia are frequently less than ten years old, have been built up by individual initiative and have developed by re-investment of surpluses. Since small enterprises have generally found it difficult to obtain professional assistance in preparing project proposals, relatively few private SMEs have had access to funds outside the equity investments of the owner and the immediate or extended family, although some SMEs have from time to time operated on suppliers credit. Recent sector studies show that the development potential of the SME sector is significant. The positive business climate, the removal of policy distortions in the context of the ERP and the changes in the National Investment Code have all enhanced the scope for SME development in such diverse sectors as food processing, fish processing, tanning for export and domestic markets, vegetable and tropical fruits for domestic and export markets, and tourism and tourism-related activities. Despite this, the sector faces some severe constraints. More than the larger, often public, enterprises private SMEs suffer from limited access to training facilities, a shortage of technical and managerial skills, and difficult access to institutional credit, even though they appear to have substantial borrowing capacity as their debt/equity ratio is generally very low.

As far as possible candidates for divested Board functions within the private sector are concerned, the membership list of the Gambia Chamber of Commerce provides an overview of the potential investor pool of private sector firms that might have the financial and managerial wherewithal to consider investing in enterprises that, currently, are within the ambit of the parastatal sector. There are 85 full or associate members of the Chamber. The major categories of businesses represented in the membership list include the following:

<u>Type of Business</u>	<u>No. of Firms</u>
Construction and Engineering	5
Manufacturing and Processing	13*
Trading and Merchandising	50
Other	17**
	<u>85</u>

*Includes 6 fish and shrimp enterprises and 3 firms wholly-owned or part-owned by Government.

**Comprising service firms such as accountants, travel agencies, insurance etc., transport firms, banks, hotels etc.

Source: Gambia Chamber of Commerce and Industry.

In brief, the profile reflects the conclusions of the IBRD analysis that the major business of The Gambia is in trading (largely importing and re-exporting). Relatively few firms are in the business of manufacturing and processing, with the maritime food sub-sector dominating this small category. Yet the trading sub-sector has several, by Gambian standards, major players with long track-records of success in buying and selling goods of a wide range for sale in The Gambia and the region.

Discussion with knowledgeable individuals in the Gambian private sector (traders, manufacturers, service firms such as financial institutions, accountants, etc.), the public sector, and donor agencies indicate that there are, probably, no more than ten Gambian private sector firms that have the capability to consider an investment of the magnitude of, for instance, the groundnut oil processing facility presently owned by GPMB. The current range of business activities undertaken by these firms include property development, importing and re-exporting, hotel ownership, and service agencies.

Needless to say, potential investors are cautious when discussing their level of interest in assuming control of GPMB operations. During the course of interviews with leading private sector firms, interest was invariably expressed in principle in the oil mill, but contingent upon them gaining full management control, some guarantee regarding minimum groundnut supplies and complete freedom in marketing mill output. Conceptually, it is presented as acceptable that the investment could take the form of a joint-venture with: an off-shore partner who would provide, in addition to capital, technical know-how and market contact; and, perhaps, a minority Government stake (to provide a degree of political insurance - an addition that, no doubt, an off-shore partner would find re-insuring).

Indeed, a representative of a European firm has recently expressed interest in the GPMB oil mill. Subsequent contact with the firm concerned revealed that:

- the firm is part of a group that owns plantations world wide and is currently rehabilitating a sesame oil mill in Somalia;
- interest is in a majority ownership of the GPMB oil mill, which would be expanded and made capable of crushing other oilseeds;
- the firm would want complete control over the marketing of mill products and preferably over the supply of groundnuts;
- GOTG participation would be welcomed.

It is understood that the firm has now made a formal submission to GOTG, although officials at NIB were not aware of this. It is unlikely that the proposal includes an offer price for the mill, which presumably would be contingent on a full technical and financial feasibility study.

The above is cited not for discussion as a serious proposition, but rather as an indication of the level of overseas interest that could probably be generated in acquiring the oil mill.

As far as local interest in the oil mill is concerned, a moot question is: 'Why would local investors be interested in a capital intensive investment such as the oil mill when lucrative trading opportunities are available that require minimal capital investment, albeit with a relatively high level of working capital?' The answer would seem to be that trading opportunities, while still plentiful, are now showing only limited growth and are prone to unpredictable closures (e.g. the sharp reduction in the volume of rice re-exports to Senegal occasioned by the GOS adjusting domestic rice prices downwards to meet, more closely, world parity prices for rice.) Larger-scale traders are, therefore, seeking domestically-based investment opportunities (e.g. hotels, restaurants) as a means of placing trading profits in productive use. In an environment in which the rules governing the re-export trade do, or can, change unexpectedly and quickly, domestic-based investments offer a more predictable income flow.

Local entrepreneurs also expressed interest, again in principle, in other GPMB operations, including transport and primary marketing. One firm has already been involved peripherally with efforts to provide a suitable outlet for marketable surpluses generated by the CRS sesame project. The large trading firms are particularly well placed to participate in final groundnut marketing.

As far as capability is concerned, it should be remembered that groundnut oil milling was in private hands pre - 1973/74. At the same time, the private sector is already active in groundnut purchasing, operating at demonstrably higher efficiency levels than GCU. The capability and expertise which a specialist overseas firm could bring to groundnut processing do not require elaboration.

Sub-sector profitability

The current cost structure of the sub-sector, roughly estimated from GPMB provisional figures for FY 1987/88, is shown in Table 10.

TABLE 10

Groundnut Sub-Sector Cost Structure (1987/88)

		D./tonne undecorticated groundnut	<u>z</u>
Average price realised		1450	100
Taxes (export tax/excise duty)		160	11
Board expenses:			
Admin. overhead	50		
Interest	150		
Depreciation	70		
Port charges/ shipping costs	60		
Handling/storage/ processing	150		
Transportation allowance	60		
Buying allowance	90	630	43
Producer Price		1500	103
Implied level of subsidy/Board loss		(840)	(57)

Note:

1/ Average of all sales, both local and export, of FAQ groundnuts and products; by comparison, the corresponding figure for FAQ groundnuts for export was D.1895 per tonne for the 9 months to end-August 1988.

Source: derived from GPMB data.

The figures, of course, represent an unsustainable situation, but provide a starting point in deriving possible margins available in groundnut trading and marketing. Earlier studies indicate that haulage and buying allowances have declined in real value over the last few years and now only provide a minimal return even to efficient traders. The category "handling, storage and processing" is heavily weighted towards GPMB's mill operation. Port charges, shipping etc., are probably not subject to savings. Depreciation is a difficult cost category to analyze since it is determined by the profile of the Board's assets (recently revalued), which would undoubtedly charge under private sector operation of the sub-sector. As with depreciation, a large part of the Board's interest charges should be reallocated back to the milling operation. The final Board expense, overhead, would clearly decrease (or disappear) with privatization of the Board's commercial activities. It would, finally, be a reasonable assumption that the quid pro quo for the elimination of producer subsidies would be the removal of the export tax.

If it is assumed that the milling operation can yield a satisfactory return even with groundnuts imputed at their opportunity cost (the analysis presented in Section 3 was not conclusive, but indicated that this might be possible if certain conditions prevailed) and with the addition of interest and depreciation charges, then put crudely the potential margin in the sub-sector is the difference between the FOB groundnut price and a suitable (i.e. incentive) price for the producer.

It is beyond the scope of this study to attempt to undertake the domestic resource cost, farm budgeting, and equi-marginal return analysis that would be required to derive a rigorous farmgate price. However, farm budget data^{1/} indicates an annual labour requirement for groundnuts of 109 days per hectare. The imputed cost of labour is by far the major cost item in the groundnut farm budget, with minor additional costs for some draught power, seeds etc. The current minimum government wage is D. 5.5 per day. Officials at CRS, however, report that they pay D. 10 per day to secure rural unskilled labour. At an average yield of 1 to 1.2 tonnes per hectare, this would imply a minimum producer price in the range D900 - 1100 per tonne.^{2/} By comparison, recent composite groundnut price projections, adjusted to an fob - Banjul basis, are shown below.

^{1/} Cited in USAID, 'An Economic and Operations Analysis of the Gambia Produce Marketing Board', 1985. See Bibliography.

^{2/} This can be compared to the current (1988/89) producer price of D1100 per tonne, an estimated D900 per tonne if producer price subsidies are removed within the existing cost structure, and a recently announced Senegalese price for 1988/89 of approximately D1600 per tonne (CFA 70 per kg, down from CFA 90 per kg for the previous season).

Composite Groundnut
Price Projections

<u>Year</u>	<u>D/Tonne</u>
1990	1,939
1995	2,189
2000	1,807

Note: Price projections converted to FOB Banjul by deducting US\$ 45/tonne from CIF prices (source GPMB), and using an exchange rate of D.6.95 equals US \$1.00.

Source: World Bank

The figures above would therefore indicate a real projected gross margin between realizable export receipts and a minimum acceptable level of farmgate price in the range of D700 to 1300 per tonne. These calculations are, of necessity, crude approximations, but they do point to a substantial potential margin in trading and marketing groundnuts, certainly adequate to attract private sector entry into the industry.

Finance

The financial sector in The Gambia consists of the Central Bank (CBG), a non-operating Agricultural Development Bank (ADB) which provided agricultural credit from its establishment in 1981 until it ran into difficulties in 1982, and three commercial banks: Standard Chartered Bank (Gambia) Limited (SCBG), a subsidiary of Standard Chartered of London with minority (10 percent) local private and government (15 percent) ownership; Banque Internationale pour le Commerce et l'Industrie (BICI), a branch of Senegal's BICI; and the Gambia Commercial and Development Bank (GCDB), which is fully owned by the government.

Figures for the sectoral distribution of commercial bank lending as at September 1988 are provided in Table 11.

TABLE 11

Sectoral Distribution of Outstanding Credit
by Commercial Banks
 (September 1988 in %)

	<u>GCDB</u>	<u>SCBG</u>	<u>BICI</u>	<u>TOTAL</u>
Agriculture	19.6	0.1	-	15.6
Fishing	9.8	2.6	5.8	8.6
Mining and Quarrying	0.4	-	-	0.4
Building and Construction	8.4	6.3	14.6	8.6
Transportation	6.9	1.9	1.7	5.9
Distributive Trades	14.2	56.7	51.5	22.5
Tourism	8.4	22.3	1.5	9.5
Personal Loans	13.2	6.3	24.9	13.3
Other	19.1	3.8	-	15.6
Total	100.0	100.0	100.0	100.0

Source: CBG

As is evident the only Bank providing lending to agriculture is GCDB; most of this is for groundnut marketing, which could equally be considered as trading/marketing credit provision.

Trade finance is the main area of activity for SCBG and BICI. Lending by these two banks is predominantly short term and takes the form of overdrafts and advances. The main recipient sectors are distributive trades, building, tourism, and transportation, which together account for over 75 percent of the portfolio of both banks. Although the two banks have so far concentrated on short term commercial loans, they are interested in diversifying into long term productive activities. Both banks are also currently liquid. In the past they have been constrained by not having the capacity for investment project appraisal. It is intended that the forthcoming World Bank-financed Enterprise Development Project will include provision for staff training in project appraisal and supervision. At the same time, plans for the restructuring of GCDB include the establishment of a department for lending to agriculture.

There is no formal government policy framework for lending to agriculture. Undoubtedly both SCBG and BICI have been reluctant to provide either seasonal or term finance to agriculture given the dominant and institutionalized presence of GCU and its poor repayment record.

On the assumption, however, of an enlarged private sector role in groundnut purchasing, there would appear to be no constraints to both Banks providing seasonal finance. Under the 1971 GBG Act, the Central Bank was empowered to provide finance directly to government parastatals. Within this enabling legislation, GPMB operates a marketing account with CBG on a two-week cycle. This facility includes a refinancing agreement with GCDB for groundnut marketing. The agreement could easily be extended to the other two banks.

As for term finance for asset purchase, as well as finance for working capital requirements, the position is less clear, given the high cost of money (current interest rates in the range 25 to 27 percent) on offer through the commercial banking system. It is likely, however, that the purchase and operation of the oil mill, for instance, would be through a consortium which would have access to outside finance. At the same time, many of the large private local companies have extensive trading and financial contacts outside the Gambia and could use these sources to provide less expensive long-term finance.

The general climate would therefore appear favorable for private sector involvement in the groundnut industry. The economic environment is supportive, a sufficiently large number of companies exist, which are willing and capable of assuming control of key GPMB activities, margins are available to allow profitable operation, and finance, albeit expensive, is available.

4.3 The case for divestment

The case for privatization of public sector activities and assets is invariably argued in terms of potential gains in economic efficiency, although interestingly very few privatization programs have ever quantified a priori the likely gains attendant on divestiture. Decisions are usually intuitive and derive from general observation and experience which appear to support the notion that private entrepreneurs are more efficient in providing the vast majority of goods and services than are governments. The case against privatization relies heavily on ideas of market imperfection and failure, and natural monopolies. As the current cost structure of the industry presented in Table 10 shows, efficiency gains are critical to the success of government policy towards the groundnut industry, since without them it is unlikely that producers can be paid a sufficiently attractive price to maintain their interest in groundnut cultivation. Conversely, the potential for any net taxation of the sub-sector is contingent on a substantially more efficient allocation of resources within the groundnut marketing system. An attempt will be made below to quantify some of the efficiency gains that might be secured by privatizing GPMB activities, but these should be viewed as indicative only.

In terms of GPMB's current activities, privatization options are limited. As discussed in Section 3, the Board is now out of a number of those functions traditionally undertaken by monopsony/monopoly crop marketing boards. In essence, GPMB's three main activities are: groundnut purchasing, groundnut processing, and the marketing of groundnut overseas and groundnut products both overseas and locally.

All other Board activities and assets are subsumed within these three key activities. The GPMB transport function, for instance, is an adjunct to the processing and/or marketing of groundnuts. Similarly, GPMC's rationale derives from the Board's overseas marketing activities.

Groundnut purchasing

Since private sector licensed buying agents are already engaged in primary marketing of groundnuts, the option at this level is whether or not it is desirable to augment their role.

As detailed in Section 2, the private trader over the last 10 years has played a declining role in groundnut marketing. Between the 1974/75 and 1987/88 seasons the private traders' share of groundnuts delivered to GPMB depots declined from 60 to 20 percent-of the marketed crop. This is largely because private traders found it difficult to compete with GCU, which operates in a non-commercial environment. The declining value of trading margins in real terms, coupled with more stringent financing conditions from the commercial banks, discouraged private sector involvement in groundnut marketing.

All the reports on groundnut marketing suggest that private traders have a record of offering farmers better marketing services, including price, which is supposed to be fixed at the farmgate level. This conclusion was certainly corroborated during the admittedly limited fieldwork conducted during the course of the study.

At the same time, the marketing efficiency of private traders is unambiguously superior to that of GCU. The most recent study on crop purchase^{1/} found a 77 percent, or D. 57 per tonne, difference between the average of GCU and private trader marketing costs. In 1987/88, GCU purchased 80 percent of the marketed crop. On the Board's budgeted purchases for the 1988/89 season of 70,000 tonnes, the same proportionate level of GCU purchase would indicate a potential efficiency gain of D. 3.2 million. Enhanced private sector involvement, therefore, holds out the possibility for substantial and continuing efficiency gains.

Another major advantage conferred by greater private trader participation at the primary marketing level would be the break-up of GCU's de facto monopoly in input and credit supply. It would also allow the evolution of the type of marketing infrastructure required if cash crop diversification is to be successful. The recent experience with the CRS sesame project underscores the need for this.

Groundnut processing

The analysis presented in sub-section 3.4 showed quite clearly that the oil mill has not been operated in a commercial manner. Technical day-to-day management of the mill is totally divorced from any commercial decision-making. Reporting of mill financial results is operationally of little value and the GPMB has made little effort to investigate the more profitable domestic and regional market for refined oil. The bias towards traditional export outlets in Europe for crude oil and cake has undoubtedly been reinforced by GPMC being located in the U.K.

The question is whether, with suitable reorganization of mill management, marketing and financial reporting, GPMB could secure a comparable level of efficiency to a private firm operating the mill. Experience to date would suggest not. Moreover, without the commercial imperative of having to run profitably or going out of business, it is doubtful whether GPMB would make the correct strategic and capital investment decisions for the future development of the mill.

The recent experience with sesame indicates the type of parastatal attitude which militates against sound commercial practice. In an effort to find a marketing outlet for the excess production from its sesame project (basically designed for home consumption), CRS approached GPMB to mill the seed on its behalf for a fee or to offer

^{1/} "Groundnut Marketing in The Gambia", 1987/88, G.E. Langan (see Bibliography).

a price for the seed and dispose of the oil and cake as the Board wished. GPMB, after some deliberation, finally declined to process the sesame, although technically there are no problems in doing so (see Annex 12) and the amount offered would not have interfered with the mill's regular schedule.

The ability to process other seeds would be a major advantage of the private sector taking over operation of the mill. GPMB's current position appears to be that, since oilseeds such as sesame are not on the Board's list of prescribed commodities (groundnuts, paddy rice, and cotton), the handling of additional crops would require a formal amendment. The crop concerned would then be subject to producer price determination, calculation of buying agent allowances, etc., as with other crops handled. This would clearly be a retrograde step if increased output of crops like sesame is to be encouraged and also runs counter to general GOTG policy of liberalizing agricultural prices.

The final constraint to a more commercially-oriented management of the oil mill is the environment in which parastatals must operate. Although this has improved under the performance contract, lack of autonomy in areas such as performance - linked salaries severely affects motivation and management morale. Furthermore, the extremely low level generally of government wages and salaries encourages pilferage and other business malpractice.

The major objection to private sector ownership and control of the oil mill is that it will replace a public with a private monopoly. Certainly, given the outlook for producer price levels, it is unlikely that the future size of crop marketed would justify the operation of another mill. One way of avoiding abuse of mill monopoly power would be to ensure the continued existence of a parallel marketing chain of decorticated groundnuts for export. With such an alternative in place, the fob prices realizable for faq groundnuts would effectively underpin selling prices at the various points in the marketing chain. There are currently two decortivating plants (at Denton Bridge and Kaur) and a possibility of establishing a third with idle equipment available in oil mills no. 1 and 2. It should, therefore, be possible to foster competition in the purchase of undecorticated groundnuts.

It is not possible to quantify the likely efficiency gain from private sector control of the oil mill. Gains may be expected, however, in both operational efficiency improvements (reduced costs) and crushing margins (increased added value). To put the latter in some perspective, a 10 percent crushing margin, based on the Board's budgeted faq price and mill throughput for 1988/89; would contribute D.5.2 million to mill operating and overhead costs.

The options for private sector involvement in the mill operation are limited to:

- outright ownership and control;
- management contract;
- milling fee.

It should be noted that private sector representatives interviewed were emphatically not interested in operating the mill on a milling fee basis.

Groundnut marketing

Without a detailed study to examine depot, storage/handling, decorticating and shipment margins, it is difficult to take a view on the Board's relative efficiency in handling groundnuts after purchasing them from LBAs. Moreover, a similarly detailed study of historical groundnut export prices realized against corresponding market quotations would be necessary to assess the Board's external marketing performance. An earlier analysis of GPMB's external marketing^{1/} was not conclusive. More generally in groundnut marketing, another study^{2/} drew attention to the costly program of construction of depots and related facilities, which amounted to an expenditure of D. 38 million between 1974 and 1983. Many of these facilities were poorly sited and were subsequently under-utilized. Again, this is an example of lack of commercial perspective and imperative within GPMB.

A more recent example is the 8000 tonnes of groundnuts from the 1987/88 season still up-country as at November 1988. The interest costs on these purchases, even at the the favorable rate the GPMB receives from the CBG, amount to D. 140,000, per month, quite apart from deterioration in quality. It is difficult to envisage a private firm facing this situation and not taking immediate measures (e.g., evacuation by road) to rectify it.

The main technical argument against a role for the private sector is the perceived loss of quality control, currently assured by GPMB involvement. Quality control would, however, be recommended as a function to be retained by the restructured GPMB.

4.4 Outstanding concerns

The major outstanding residual concern raised by government officials over privatization of groundnut marketing was the loss of control over financial flows, especially foreign exchange. With the Gambia's current high debt service ratio, it is understandable that GOTG should be able to plan the flow of foreign exchange receipts.

^{1/} 'An Economic and Operations Analysis of the GPMB,' USAID, May 1988, Chapter 2, Page 116 (see Bibliography)

^{2/} 'Privatization Opportunities,' Jean Crouzet, March 1986 (see Bibliography)

Keeping track of foreign exchange was certainly a problem under the previous regime of fixed exchange rates, which encouraged the development of a thriving parallel market. Since the Dalasis has been floated there has been a tendency for foreign exchange to come back through the banking system. For instance, the commercial banks recently offered to sell foreign exchange to the CBG under the ruling that if foreign exchange deposits exceed a certain figure, the banks have to put the surplus on offer to the other commercial banks or the CBG.

The movement of foreign exchange earnings back into The Gambia is obviously encouraged by the favorable differential interest rate on offer. Conversely, any firm conducting business in The Gambia will require Dalasis for local capital expenditures, operating costs and working capital. High local rates of interest encourage the use of retained foreign exchange earnings to fund local operations. This is not to say that leakages will not occur. Some of the apparent leakage from the system may, however, be a diversion of foreign exchange into import financing, for example, for the re-export trade. This will not appear in official flows, but under a system of liberal foreign exchange controls there is no net adverse impact on foreign exchange availability. The example was provided of an entrepreneur in the fishing industry selling shark fins to Hong Kong. The foreign exchange earned is then used to purchase second-hand clothing for import into The Gambia. In spite of such anecdotal evidence, however, the concern of GOTG is recognized; thus, the strategy outlined in the following section specifically addresses this issue.

The other major area of loss of control might be taxation flows. GPMB is large and highly visible and GOTG has in the past had access to surpluses made by the Board. However, GOTG's net tax-take from the sub-sector is currently negative. At least the privatization of Board activities holds out the possibility of efficiency gains and thus future taxation potential. Moreover, export and excise taxes are difficult to avoid/evade. It would only be in the instance of majority foreign ownership by a transnational that concern might arise over transfer pricing. Again, this concern is dealt with in the proposed divestment strategy.

There are, finally, worries over social disruption, especially unemployment, resulting from the redistribution of responsibilities within the sub-sector. To the extent that the private sector offers increased operating efficiency, redundancies can be expected. GPMB's experience with its own retrenchment program is, however, highly encouraging. Agreement was reached with the union concerned and the majority of senior staff were re-employed elsewhere. Other staff successfully set up small businesses with assistance from IBAS.

It should, in summary, be noted that all liberalization measures face the fundamental problem that their exact outcome cannot be predicted in advance. However, in the Gambian context some comfort can be taken from recent liberalization measures that have proved successful. The most notable example to date is the floating of the Dalasis. Equally, however, the liberalization of the rice trade, after an uncertain start, showed that private sector operation could work, with the price of a 50kg bag falling from D130 to D85 as a result of competitive pressures.

5. DIVESTMENT PLAN

5.1 General Strategy

The analysis presented in the preceding section suggests that the privatization of GPMB's major activities is both practicable and desirable. It should be stressed, however, that the redistribution of responsibilities within the sub-sector will be a major undertaking with extremely serious ramifications if it fails. What follows, therefore, is an outline strategy which presents the necessary changes in a logical sequential framework and is gradualist in the sense that the outcome of each step can be assessed and remedial actions taken if necessary. In this way the strategy explicitly addresses the concerns outlined in the previous section.

In line with the discussion in the previous section, the strategy is designed to liberalize the three key areas of GPMB's involvement in the groundnut marketing chain, specifically by:

- encouraging greater private trader involvement in groundnut purchasing as an initial step towards upward vertical integration into depot operation and management;
- making provision for ultimate private sector management and control of the oil mill after an interim period under a management contract;
- allowing large local, and possibly foreign, trading firms to become involved in groundnut marketing as a precursor to downwards vertical integration into operating and managing decorticating plant and terminal facilities.

The strategy, therefore, for privatizing GPMB's peripheral activities, its crop purchasing role, and its processing and marketing functions is discussed below, followed by an outline of the residual role which the GPMB would perform.

1. Peripheral Activities

Both rice milling and cotton processing are extremely marginal to GPMB's core business (estimated for 1987/88 in relative tonnage terms at 2.4 and 1.4 percent of groundnut purchases respectively) and have consistently operated at a loss. However, GPMB's management considers that with the new mill at Kuntaur, rice milling could be upgraded from a non-commercial to a commercial activity; and, that a doubling of cotton throughput in the 1988/89 season could secure viability for the cotton ginnery. Nevertheless, both rice and cotton are classed under the terms of the Performance Contract as non-commercial activities and are designated for divestiture. Experience elsewhere suggests that hybrid parastatals (i.e. those that attempt to run commercial and non-commercial operations) are not successful in meeting both their profit-making and developmental/social objectives. It is, therefore, recommended that the Board formulate a plan of action during the forthcoming

season (1988/89) for the disposal of the rice and cotton operations. Given that the cotton project is still at a developmental stage, the appropriate government organization to be responsible for the currently under-utilized ginning capacity would logically be the MOA. This would require the MOA also assuming responsibility for the importation and distribution of inputs for cotton (fertilizer, pesticides and seed cotton), currently valued at about D.2 million per annum. Effectively the MOA would be the custodian for the project until such time as returns were sufficient to attract private sector interest. However, if the project concept and development to date hold out the prospect of a profitable venture, then GOTG should also consider investigating local or foreign interest in the project immediately. To the extent that the rice mill at Kuntaur can show viability, a firm plan for disposal to the private sector should be prepared.

As far as GPMC and GRTC are concerned,^{1/} the treatment of the former Board subsidiary falls out from the approach to divestment of processing and external marketing (see below). Although a decision has not formally been taken on GRTC, the current thinking within NIB is to arrange a separate performance contract between the GPMB's and GRTC at the same time (December 1988) that the GPMB's performance contract comes up for renewal. With subsequent rehabilitation, the opportunities for privatizing GRTC would then be explored. It is not clear what services GRTC could provide given its current state of finances and equipment. The issue of rehabilitation appears paramount. The rehabilitation requirements of GRTC should, therefore, be studied as a matter of priority. At the same time, the appropriateness of private sector involvement in river transport should be investigated and a time horizon developed for the privatization of the rehabilitated company. Both the UK ODA and USAID could be approached to fund such a study so that a study team could be mobilized in early 1989.

2. Groundnut Purchasing

The current GOTG policy is to encourage the maximum participation of private traders in the groundnut purchasing business. As an interim measure, therefore, the Board should agree to raise its buying allowance for the 1988/9 season to cover buyer's costs and thereby maintain private sector interest in groundnut purchasing (the allowance has not yet been fixed for the 88/89 season). The GPMB

^{1/}Neither subsidiary can be strictly considered "peripheral", but they are dealt with in this sub-section since NIB makes the distinction between their operation and GPMB "core" activities.

has invited submissions from LBAs, although the GPMB budget for 1988/89 does not assume any increase in the buying allowance. Given that allowances have declined in real terms over the past 3 years or more, the minimum adjustment would be for the GPMB to compensate for inflation in establishing the allowance for the forthcoming season.

For the following season (1989/90), it is recommended that the GPMB move to an ex-depot price, which would allow marketing margins to be competitively determined. This recommendation has been advanced in previous studies of groundnut marketing^{1/}. Its introduction is clearly constrained in a marketing system which sets a fixed producer price at the farmgate level. It is recommended, however, that ex-depot pricing be introduced at the same time that price subsidies are removed, i.e. prior to the 1989/90 season.

One objection often heard about ex-depot pricing is that it allows unscrupulous traders to cheat groundnut farmers. However, based on our limited interviews with farmers, it appears that farmers generally are aware of the level of producer price although the relationship between the official GOTG producer price per tonne and what farmers actually receive for bags delivered to the GCU or other buyers is not always clear to them. Rather, the farmer is concerned with receiving what appears to be a reasonable return than an assured farmgate price (in many instances, the farmer does not receive the official producer price even under the current pricing regime).

At the same time the GPMB could facilitate deliveries by farmers themselves (individually or collectively) by reviewing its licensing procedures and agreeing to pay cash upon delivery of some minimum tonnage. A final assurance for farmers is the existence of alternative marketing outlets available to them other than private traders; i.e. the GCU and the Senegalese market.

Ex-depot pricing confers additional advantages, namely:

- it relieves the Board of the burden of attempting to derive accurate average costs of groundnut marketing;
- with producer subsidies scheduled to be removed in 1989/90, a transition to posted depot prices will help cushion the resultant fall in producer prices, because the monetary illusion will be of a higher than otherwise price per tonne.

The GPMB would calculate ex-depot prices in the same way it currently computes producer prices; i.e., by projecting overall sub-sector income (crop purchased, out-turns and projected prices to

^{1/} The Domestic Groundnut Marketing System in the Gambia,' Christine Jones, April 1986 (see Bibliography).

be realized for groundnuts) and then deducting GPMB's costs to arrive at the amount available to purchase the estimated marketed crop. However, analysis presented elsewhere in this study suggests that, within the current sub-sector cost structure, implicit producer prices would be below an incentive price once subsidies are removed. It is important, therefore, that the GOTG concurrently reviews its policy on groundnut and product export tax (the income from the export tax is currently slightly less than the level of groundnut producer price subsidy); otherwise, the level of ex-depot price will imply an inadequate farmgate price, even assuming efficiency in primary marketing. In computing ex-depot prices, the GPMB finally may wish to consider replacing current panterritorial prices with differential depot prices which reflect the different costs of transporting groundnuts from each depot to the point of final processing/marketing.

3. Groundnut Processing

Recommendations for the divestment of the oil mill are influenced by two important considerations:

- the uncertain economics of groundnut oil processing;
- GOTG concern over loss of control over export revenues.

The first consideration makes a valuation of the mill almost impossible, even on a caveat emptor basis, while the second effectively precludes private sector involvement (given that private firms are not interested in operating the oil mill on a milling fee basis).

The proposed strategy for the divestment of the oil mill is initially, therefore, that there be the negotiation of a management contract with an investor(s) with an option to buy at some specified future date. The private sector consortium that wins the contract would have full autonomy in managing the mill, including determining level of throughput, product mix, market outlets and contract prices. Proceeds, however, would revert to GPMB. GPMB would also fund the oil mill operations and would supply whatever quantities of groundnuts the mill management required, costed at the GPMB's opportunity cost: i.e., FAQ groundnuts fob, minus shipping/handling charges. At this stage, the GPMB would continue to decorticate nuts and to operate the Denton Bridge power plant.

The GPMB's marketing role would be restricted to realizing the best possible export prices for decorticated groundnuts. This would suggest a considerably reduced marketing presence in the U.K., perhaps just a marketing liaison officer located in the commercial department of the London Embassy as NIB anticipates.

It is recommended that performance (and hence fees) under the terms of the management contract for the mill operation be evaluated on two general criteria:

- meeting targets for unit cost efficiency of operation, including minimization of product losses;
- meeting specified levels of gross crushing margin (i.e. the level of value added to groundnuts costed at fob sales price).

Once the exact terms and conditions of the management contract were determined, invitations would be issued for firms and consortia to present detailed proposals for operating the mill in line with these requirements. Final selection would be made by a committee comprising the GPMB, NIB and MOFT representatives.

The intervening period (say 3 years) between letting the management contract and selling the oil mill will allow a view to be taken on ultimate viability of the oil mill (and, by inference, its likely sales value). At the same time, a position of trust can be built up between the consortium operating the mill and GPMB and GOTG officials. It is envisaged that at the point of sale, at which time the management of the mill will assume responsibility for all financial aspects of mill operation including control over export receipts, government would take a minority shareholding.

It is not intended to pre-judge the management contract selection, but in terms of the final disposal of the oil mill, a three-party joint-venture investment (Gambian private sector firm, the GOTG and an off-shore firm) could offer several important advantages:

- add technical and market strength via the off-shore firm;
- provide access to external finance;
- capitalize on local knowledge and expertise;
- GOTG presence providing a degree of political insurance;
- politically palatable in that GOTG presence could assuage fears that local private sector and/or foreign ownership would be to the disadvantage of Gambian interests.

Finally, equity demands that the current mill management would be allowed to propose for the management contract, either alone or via a consortium.

An issue to be resolved at the point of sale of the mill will be access to power and decortivating facilities. It is assumed that during the currency of the management contract, GPMB will operate the power station, providing electricity and steam to the oil mill and electricity into the grid at a price agreed upon with GUC. The GPMB would also operate the decortivating plant. As discussed in the preceding section, it is important from a competition viewpoint that parallel marketing systems operate for groundnuts and for groundnut products. One possibility would be to investigate disposing of the South-side Denton bridge facility as an integrated decortication/power generation unit. The facility would be operated as an independent company selling:

- power to GUC;
- steam to the oil mill to operate the 0.7 MW turbine, which would be sufficient energy at the present level of mill operations;
- decorticated kernels for mill processing.

The main objection to this might be from the mill owners who would be dependent on another company for the supply of decorticated groundnuts. However, as the review of the plant illustrates (sub-section 3.4), there is sufficient equipment at the site to duplicate the current capacity of the decortivating line. The attendant problem of dependence for power supplies is more difficult, although it should be noted that with the rehabilitation of the currently idle turbo-generator set in the oil mill, the reliance would be for steam rather than electricity per se. It should be possible to reach an agreement over guaranteed supplies.

4. Groundnut marketing

The divestment of the oil mill is central to the whole liberalization of sub-sector marketing, since private disposal of mill products effectively means the demise of GPMB monopoly control. As discussed in the previous section, one strategic option would be to allow the GPMB to continue buying groundnuts through LBAs and marketing decorticated groundnuts either to the oil mill or overseas. There were, however, felt to be efficiency gains in allowing the private sector to enter this area of activity as well.

It is envisaged that private sector entry into groundnut marketing will emerge from both above and below in the system. The removal with the sale of the mill, of GPMB's monopoly will allow the larger Banjul-based traders (and possibly foreign firms) to trade in groundnuts either for export or to the mill. The logical move of such entrants into the marketing system would be the acquisition of decortivating facilities either at Kaur or Denton Bridge. At the same time smaller firms will have gained experience in operating at the depot level. They are also likely to be interested in moving upward into decortication and final marketing.

The sequential movement of GPMB out of groundnut marketing would be:

- determine ex-Denton Bridge and ex-Kaur groundnut prices (with perhaps indicative corresponding farmgate prices for the major regions);
- dispose of depots to the private sector (with the exception of the Denton Bridge and Kaur depots);
- sell/lease decortivating plants;
- dispose of Denton bridge terminal facilities.

As noted above, an important part of the program for divestment of the decortication plans will be to ensure alternative outlets to an integrated decortication/processing mill complex.

5. Residual role for GPMB

It is envisaged that with the disposal of its commercial activities, the GPMB's role within the sub-sector would become that of a non-trading regulatory agency.

Potential GPMB functions would include:

- quality control;
- industry code of standards (mesh size, recommended chemicals, fertilizers etc);
- licensing of traders, decorticating plants and oil mill;
- farmgate price monitoring/feedback/lobbying on farmers' behalf;
- market intelligence; monitoring groundnut and producer price trends; ad hoc studies of sub-sector cost/price structure;
- research and development work on groundnuts, with further involvement in extension or liaison with MOA extension unit to monitor efficacy of R&D/Extension linkages;
- producer price stabilization.

The financing for this reduced level of GPMB activity could be made available from of a number of sources:

- disposal of assets;
- license fees;
- industry cesses;
- export tax;
- government subvention

5.2 Implementation Timetable

A timetable of major actions to be taken to implement the above strategy is presented in Table 12. The time horizon for ultimate divestment of key GPMB functions is indicative rather than definitive, but should allow sufficient time so that: the managerial absorptive capacity of GPMB, NIB and other government officials to plan, implement, and monitor change is not overloaded; and, if shortfalls occur in expected private sector performance, revisions to the strategy can be made.

It should be stressed that each of the actions listed will require a substantial input in terms of preparatory work (including studies where appropriate), preparation of detailed action plans (including, if applicable, asset valuation), execution of plans (including negotiation if assets are involved), and monitoring of action outcomes. Lead times are likely to be long.

TABLE 12

Divestment Timetable

Action	Year <u>1/</u>	1988/89	1989/90	1990/91	1991/92	1992/93	1993/94
1. Produce plan for disposal of rice mills and cotton ginnery		*					
2. Take view on GRTC rehabilitation needs and financial restructuring		*					
3. Reduce scope of GPMC activities in anticipation of oil mill management contract.		*					
4. Establish ex-depot price			*				
5. Negotiate mill management contract			*				
6. Set up GRTC as an independent company				*			
7. Divest GRTC					*		
8. Establish ex-Denton Bridge and ex-Kaur price						*	
9. Divest depots							
10. Divest decorticating plants							*
11. Divest oil mill							*
12. Establish end-state GPMB							*

1/ Years correspond to GPMB FYs (1 December to 30th November).

The corresponding timetable for major asset disposal is as follows:

<u>Asset</u>	<u>Timing</u>
Rice mills/cotton ginnery	As soon as possible
GPMB (London Office)	1988/89
GRTC	1991/92
Depots	1992/93
Decorticating plants	1993/94
Oil mill	1993/94
Power Plant	1993/94
Road transport	1993/94

To smooth out the unevenness of the asset disposal profile (heavily weighted towards 1993/94) the GPMB and NIB/MOFT should examine alternatives to outright sale, such as:

- buyer/seller financing;
- leasing (variable or fixed term);
- lease with a buy option (exercise option at any time);
- rental.

Experience elsewhere indicates a fairly lengthy process for asset disposal, requiring some level of analysis, possible restructuring, valuation, negotiation, documentation and sale. For a substantial asset, such as the oil mill, the stages outlined could require 6 to 9 months lead time.

5.3 Supporting Actions

Complementary Programs

The successful divestment of GPMB activities and assets requires a number of complementary actions and programs. The major identifiable complementary project is the proposed World Bank financed Enterprise Development Project. Although primarily aimed at SMEs and financial institution-strengthening, consideration should be given to how this project might assist in strengthening the private sector in the rural areas and specifically how to channel increased financing (seasonal and term) to rural traders.

There is also clearly a need for a program (as opposed to a study), which addresses the problem of agricultural credit. The absence of such a project will adversely impact upon sub-sector output and hence the future viability of other sub-sector operations, particularly the oil mill.

In addition to projects, there are complementary GOTG policy programs which need to be pursued to ensure successful privatization of GPMB. These include:

- the equalization of GCU and private buyers' operating environments, firstly to maintain private sector interest and, secondly, to hold out the possibility of effecting an efficiency improvement at GCU;
- the removal of groundnut producer price subsidies, as a necessary condition for introducing ex-depot price, and also to allow the GPMB to purchase as large a crop as it wishes;
- the removal (or substantial lowering) of export taxes on groundnuts and groundnut products to allow an adequate level of producer prices once subsidies are removed;^{1/}
- gradual removal of all-producer price controls to harmonize the agricultural pricing environment.

Finally, with some retrenchment a result of the redistribution of functions within the sub-sector, there will need to be a program of assistance for the retrenched workers. This could probably be catered for under the IBAS scheme.

Studies

In addition to complementary programs, there is also a need for a number of studies to provide guidance to decision-making and actions. Studies to be undertaken would include the following (studies marked with an asterisk are already planned):

1. GRTC rehabilitation requirements.* This study should cover both physical and financial rehabilitation of GRTC and should consider the potential for private involvement in river transport at the earliest opportunity.

Intended timing: FY 1988/89

2. GCU diagnostic study.* It is understood that the main thrust of this study will be in three areas, namely: to improve the organization and management of GCU; to examine the impact of GCU's operations on agriculture; and, to develop strategies to secure the future financial viability of GCU's operations. The study's recommendations should help to improve GCU efficiency and thereby maintain a level of competition and plurality in groundnut marketing.

Intended Timing: FY 1988/89.

3. A World Bank-financed study of groundnut marketing.* Detailed terms of reference were not available for this intended study, but from the viewpoint of assisting the implementation program of GPMB privatization the study should, inter alia, cover the following areas:

^{1/} Government policy on groundnut export tax has not yet been decided.

- current constraints to private trader involvement in groundnut buying (particularly credit), with recommendations to remove constraints identified;
- measures to enhance the farmers' role in primary marketing in areas such as licensing, minimum acceptable quantities, sales on a cash-on-delivery basis etc;
- the level of producer price required to provide adequate incentives to groundnut farmers in line with GOTG/GPMB policy on sub-sector output;
- whether or not, within the current and projected price and cost structure facing the industry, an incentive producer price allows for adequate returns to groundnut traders.

Intended Timing: FY 1988/89

4. Producer Price Stabilization. GPMB's stabilization reserves were effectively exhausted by 1979^{1/}. Funds earmarked for groundnut price stabilization were used for other purposes by the GPMB and the GOTG. The GPMB's past performance in successfully stabilizing prices has been extremely variable, especially given recent trends towards ever decreasing world price levels. With the removal of subsidies in 1989/90, however, the question of the desirability and practicability of operating a groundnut price stabilization fund will again arise. If GOTG decides to establish a price stabilization fund, it is critical to specify who would operate the fund and how it would be financed. Ancillary issues concern whether or not incomes rather than producer prices should be stabilized, and examining alternatives such as crop insurance schemes, since fluctuations in farmers' incomes are primarily determined by the frequency of drought and pestilence.

Required Timing: FY 1988/89 - 1989/90

5. Economics of the oil mill. The overall objective of this study will be to examine the commercial viability of the oil mill and to make recommendations for improving financial performance. The study would examine past prices realized for mill products and assess the past performance of the mill in adding value. The markets and price prospects for current, and possibly new, mill products would be appraised, as well as the impact on mill profitability of processing other oilseeds. Areas for improving efficiency of operation would be explored and financially attractive mill development options examined. The output of the report would be a detailed strategy for the commercial re-orientation of the mill as a stand-alone profit centre.

^{1/} "An Economic and Operations Analysis of GPMB," USAID, May 1985, Chapter 4, P.12 (see Bibliography).

Required Timing : FY 1988/89-1989/90 (to provide guidance to GPMB in evaluating mill management contract proposals, and subsequently to the group awarded the contract).

6. Appraisal of power plant options and mill energy audit. This study would investigate in detail the options available for the optimum utilization of the excess steam generating capacity at the plant. To do this will require an energy audit of the oil mill's current and projected requirements (timing of the study should, therefore, be phased with the above study to take account of the power implications of any recommended mill development options). The study should also detail the steps required for early agreement between GPMB and GUC on the utilization of energy surplus to the mill's requirement.

Required Timing: FY 1988/89-1989/90

7. End-state of GPMB. Prior to the final divestment of GPMB trading activities, a study will be required to assess the scope and activities of the restructured GPMB. Areas to be covered would include:
 - the functions to be undertaken by the restructured GPMB, with special attention given to possible involvement in R&D and extension and the GPMB's recommended relationship to the proposed new department of research and specialist services within the reorganized MOA;^{1/}
 - the organization and management structure required to undertake the GPMB's revised mandate;
 - projected costs of operation, identification of likely income sources, and the production of a financing plan to ensure GPMB's viability in fulfilling its role;
 - retrenchment implications of the revised organization and management structure, with proposals to minimize the problems of redundancy and redeployment.

Required Timing: FY 1992/93

8. Baseline survey of private sector involvement/performance. It is desirable that GOTG (probably through NIB) monitor the performance of the private sector as it gradually becomes more involved in groundnut marketing, by periodically reporting on efficiency as evidenced by price spreads, etc.

Required Timing: FY 1989/90 onwards.

^{1/} As recommended in 'Review of Ministry of Agriculture Report', KPMG, June 1987 (See Bibliography)_

Enabling Legislation

The termination of GPMB's monopoly power over the disposal of groundnuts and groundnut products and the establishment of the mandate and functions of a restructured GPMB will require enabling legislation. Sufficient lead time should therefore be built into the privatization program to allow for bill drafting, gazetting, cabinet and parliamentary debate, ratification and enactment.

Technical Assistance

This whole program will require careful coordination. Experience with privatization programs elsewhere points to the desirability of having an independent and impartial adviser to act as an intermediary both within government and in representing government interests in discussions and negotiations with outside private sector groups.

The appropriate government department for providing such technical assistance would be the NIB. In view of the planned project to strengthen NIB management capability, it is difficult to specify the exact level of additional assistance that would be required. At a minimum, however, there should be provision for an overall program coordinator in Year 1 and Year 5 of the program, with sufficient funding for ad hoc specialist inputs as required.

ANNEX 1

TERMS OF REFERENCE: PRIVATIZATION OF THE GAMBIA PRODUCE MARKETING BOARD

A team of three consultants from the Agricultural Marketing Improvement Strategies (AMIS) Project will analyze the assets and operations of the Gambian Produce Marketing Board (GPMB) to determine the conditions under which divestment and privatization of GPMB can be accomplished. The team will determine the economic, financial and operational measures that may be required in order to successfully privatize GPMB and draw up a viable plan and time schedule for actual divestment and privatization. Specifically, the AMIS team will carry out the following tasks:

1. Collect and review all relevant documents which pertain to GPMB's operations.
2. Consult with relevant personnel from the Ministry of Finance and Trade, the National Investment Board, GPMB and USAID/Gambia to determine the specific objectives of the GOTG regarding the GPMB oil milling facility.
3. Assess the operations and physical plant of the GPMB oil mill to determine efficiency of operation, condition of equipment, financial performance, and management capability.
4. Determine the effect on the GPMB oil mill of processing sesame seed in amounts up to 10,000 tons during the months of February through May.
5. Assess the current market value of the GPMB oil mill and, if not considered marketable in its present condition, recommend measures to be taken to put it into saleable condition and estimate the costs associated with these measures.
6. Analyze the financial performance of the GPMB's operations.
7. Identify likely buyers and determine both the technical and managerial capability of these potential buyers.
8. Discuss alternative strategies for divestiture and privatization of the GPMB with the GOTG which describe alternative means of divestiture and specifies the externalities associated with each of these strategies (e.g., adverse labor relations or the disruption of traditional groundnut marketing practices). As a result of these discussions, develop a preferred option for divestiture and privatization which minimizes negative externalities and includes a reasonable time schedule for the privatization process to take place.

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PERSONNEL INTERVIEWED

GPMB

S.S. Drammeh	Acting Managing Director
N.R. N'Jie	Administrative and Personnel Director
I. Hydara	Finance Director
Mr. Sidibeh	Senior Accountant
A.S. N'Jie	Chief Engineer
M.B. Colley	Senior Engineer
Mr. Mendy	Central Depot Manager
Mr. N'Dimbalan	Operations Officer
R. Schreurs	EEC - financed Consultant

GRTC

Mr. N'Dow	General Manager
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NIB

A. Janha	Chairman and Chief Executive
A.M. Touray	Deputy Chief Executive/Financial Controller
A.A. N'Jie	Development Manager
M.M. Jobe	

MOFT

S. Ceesay	Deputy Permanent Secretary
M.F. McPherson	HIID Economist
P. McNamara	HIID Economist

PPMU

M. Faal	Proposed Principal for Dept. Natural Resources
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CBG

E.E. Fillingham	General Manager
V. Jensen	Research Manager

CSD

Director

Customs

S. Jabai

GCU

Cooperative Union Secco Manager in Bintang

CRS

G.W. Knapp
Mr. Jobe
Mr. Sonko

Agricultural Advisor
CRS Representative in Kafuta
CRS Representative in Kafuta

Private Sector

A.T. Massry
G.S. Madi

Managing Director, T. Massry Co. Ltd.
Chairman/Managing Director S.A. Madi and
Sons Ltd.

P. N'Jie
E. Hilton
Mr. Baro
Various Farmers

Chamber of Commerce
General Manager, NTC
Trader in Kafuta

Groundnut and Product Prices and Price Projections

Year	Groundnut Oil	<u>Nominal</u> (US \$/Ton)			<u>Real</u> (1985 Constant US\$/Ton)		
		Groundnut Meal	Composite Nut	Groundnut Oil	Groundnut Meal	Composite Nut	
1970	379	102	189	1042	281	519	
1980	859	240	433	824	230	415	
1981	1043	238	496	995	227	473	
1982	585	198	319	566	201	309	
1983	711	200	375	706	223	372	
1984	1017	197	459	1027	183	464	
1985	905	143	397	905	143	397	
1986	569	165	290	481	138	245	
1987	500	162	264	385	125	203	

1988	547	194	298	389	136	212	
1989	624	229	344	417	153	230	
1990	653	223	351	430	147	231	

1995	968	236	463	529	129	256	
2000	1034	235	491	456	104	217	

NOTES:

1. Groundnut oil is any origin, cif Rotterdam
2. Groundnut meal is India 48%, cif Rotterdam to 1982; thereafter Argentine 48/50%
3. Composite nut is a derived price based on product outturns and relative prices.

Source: World Bank, International Economics Department, International Commodity Markets Division.

Depot LocationsDistance of Transit Depots from Banjul Mill

<u>Depots</u>	<u>Distance in Km</u>		<u>Duration Hours</u>	
	<u>Road</u>	<u>River</u>	<u>Road</u>	<u>River</u>
Basse	411	406	6.30	51
Bansang	345	314	5.15	43
Kuntaur	228	253	5.00	34
Kudang	188	225	5.50	29
Kaur	168	198	4.15	26
Tendaba	46	106	2.25	16
Kerewan	60	66	3.00	4

Distance of Transit Depots from Kaur Mill

<u>Depots</u>	<u>Distance in Km</u>		<u>Duration Hours</u>	
	<u>Road</u>	<u>River</u>	<u>Road</u>	<u>River</u>
Basse	243	208	2.15	15
Bansang	177	116	1.00	17
Kuntaur	60	55	0.45	8
Kudang	20	27	-	3

CURRENT OIL MILL OPERATIONS

1. PHYSICAL PLANT

The GPMB operation at Denton Bridge consists of two separate facilities, intersected by the main road to Banjul (see Attachment 1).

South Side Facility: DENTON BRIDGE TRANSIT STATION
Reception of groundnuts (G/N)
Decortication and Boiler

North Side Facility: OIL MILL NO. 1
Oil Mill Processing

A) DENTON BRIDGE TRANSIT STATION

The transit station receives raw G/N, presently 50,000 tonnes per annum, which is 70% of the crop, but could handle much more. It is equipped with 4 intake lines. 80 percent of the crop is received by river. Three discharge lines are each designed to unload 200 tonnes in 16 hours from lighters and barges of up to 200 tonnes. Each line is equipped with a mechanical rotor lift, feeding band conveyor, discharging via elevated cleaner/destoner into hopper to bulk truck. Once the trucks are loaded (capacities ranging from 7 to 10 tonnes each), they are weighted on a weigh bridge, and unloaded towards a distributions system sending the G/N to decortication or storage. For the 20 percent of crop received by road, one line is used to handle G/N arriving in bags of 50 or 75 kg. The trucks are weighed, then the bags are opened and unloaded into a discharge pit. The capacity of unloading is 200 tonnes per 16 hours shift and cleaning is as described above.

Storage facilities include a covered area for 5,000 tonnes and "secco" for 7,000 tonnes. The storage areas are also used for rice/fertilizer.

The decortication unit was built by "Les Fils de Louis Samat", Marseille, France around 1973. It comprises 7 decorticators with a capacity of 450 tonnes per day if operated on a 3 shift basis. The output would therefore be 300 tonnes kernels and 150 tonnes of shell. The kernels known as FAQ (Fair Average Quality) are either packed in 50 kg. jute bags for export or are processed in the oil mill. All off-grade qualities go to the oil mill. The decision of whether to export or process is made by GPMB management based on the value of the crushing margin during the season. The shells are sent via pneumatic and mechanical transport to an intermediary hopper (capacity of 16 tonnes) which feeds the co-generation facility.

The composition of the G/N shells is as follows:

Calorific power	3929 Kcal/kg
C	41.34%
H	5.91%
Sulphur	0.08%
Ashes	3.45%

The co-generation facility was inaugurated in February 1988 and is arguably the most valuable asset of the Board. It consists of 2 Babcock/Fraser Water tube Boilers, (#10768/9, Date Nov. 83/Oct 83 WP 18.5 Bar HYD TP 30-38 Bar), equipped with Clyde Soot Blowers and Senior Economizers, with a capacity of 10 tonnes of steam per boiler at 80% of rated capacity. The full specification of the boilers is provided in Attachment 2. The steam produced is used both as processed steam in the oil mill and to drive the turbo-generator set of 1.5 MW to provide the plant's electricity requirements.

At the present rate of operation, the generator operates with a load of 500/600 KW and a power factor of approximately 0.6. The alternator is not synchronized with the national grid. There is a proposal from Peebles Parson for a budget price of LSTG 510,000 to install potential relays and synchronization gears. As a stand-by for operation when the boilers are not used, the plant also has one Rolls Royce diesel turboalternator with a capacity of 250 KW. The whole plant (South and North side) is connected to the co-generation system, including all buildings. The power company (GUC) is currently working on a problem with the supply cable to the plant which obliges GPMB during its maintenance period to operate on the stand-by generator.

Connection between the South and North side of the plant is effected by a long system of conveyors (belt type, approximately 500 metres long and separated in various sections), which convey the kernels directly from the SAMAT plant to the Oil Mill.

A Bridge spans the road between the 2 sections of the plant, supporting:

- Belt conveyor with capacity of 400 tonnes of kernels;
- Steam at 18 Kg;
- Power cable.

3 buffer tanks with a capacity of 100 tonnes each are installed alongside the whole line to compensate for any breakage in this long conveying system. A Scale (AVERY - Denison type 4202), is installed on the conveyor. The readings are not correct due to the presence of a larger volume of shells in the kernels. In consequence the scale is by-passed which means there is no accurate measurement of the quantity of kernels fed to the press plant.

B. OIL MILL # 1

Presses

The mill consists of three separate press lines of cookers and presses operating in two stages with a total capacity of 210 tonnes per day. The kernels are not flaked before the presses. The general layout of the lines is as follows (see also attachment 3):

E LINE

First Pressing:

- one cooker diam 7' by 5 high increases humidity up to 11% and then dries by means of lateral chimney down to 5% before pressing;
- one Prepress Long Cage (L.C) Rosedowns expeller, 50 HP.

Second Pressing:

- one cooker diam 7' by 5, 50 HPs, feeding;
- one MARK 3A Rosedown; 75HP;
- one E Type Rosedowns, 200 HP;

Foot filtration, one NIAGARA Vibrating Screen, recycling foots in bottom compartment of 2nd pressing cooker.

Old Line

First Pressing: same as above

Second Pressing:

- four cookers diam 5'6" by 4, 15 HP
- four Rosedowns D Type Maxoil Duplex 45 HP.

Foots are separated in a Niagara Vibrating Screen and recycled in a conveyor before cookers second pressing.

New Line

First Pressing: same as above

Second Pressing:

- one cooker diam 5'6", 15 HP;
- one Mark II Long Cage Expeller, 45 HP;
- four cookers diam 5'6", 15 HP;
- three Mark II Long Cage expellers, 45 HP;
- one D type Maxoil Duplex, 45 HP.

Foots are recycled before cookers second pressing.

The nominal capacity of the plant is 210 tonnes of kernel, per day but in practice the plant only achieves 180 MT when the 3 lines are in operation, giving an output of:

- 80 to 85 MT of oil;
- 95 MT of cakes at 6.5%

During the 1986/87 season the plant operated on 2 lines only for a prolonged period.

The cakes produced at the plant are bagged in 60 Kg jute bags. 90 percent is exported and 10 percent is sold on the local market. The crude oil produced by the first and second pressing are mixed and filtered through 4 filter-presses 32" x 32" x 24" and sent to two 500 MT crude oil tanks. From there the oil is piped to the refinery or transported by 3 truck tankers of 10 tonnes capacity each to the tank farm in Benjul, with storage capacity of 2,500 tonnes located at the Old Port. From there a pipeline (8") diameter sends the oil to the port main shipping wharf. The capacity of despatch is 90 tonnes per hour.

The Northside facility also includes the old oil mill #2. Part of this plant could be reused but would need to be moved to oil mill #1, where an additional line could be installed. Conversely, if solvent extraction were considered, the small presses currently in oil mill #1 could be replaced by the machines with higher capacities.

The re-usable machinery includes:

- 2 LC pre-presses. The motors have been removed but apparently all internal parts are still inside as well as the gears. These machines could be installed in parallel to the three 80 tonne presses in oil mill #1;
- 8 Mark II presses less motors. These machines could be sold, for example to CRS to process sesame if GPMB did not want to toll process them;
- Cookers (2 units diam 7" 5 high, 6 units diam 5'6" 4 high, 2 units diam 5'6" 1 high), which appear in good condition, although all the motors have been removed;
- 3 filter presses in perfect condition, which could be used in the rest of the plant;
- 3 SAMAT decorticators, which together with 4 identical units located in oil mill #1, could constitute a line of 7 machines identical to the line installed at the Transit Station and duplicate its capacity.

Refinery

The plant has 2 batch type refineries, built by Rosedowns. The new refinery has a capacity 20 tonnes per hour in 3 batches of 8 hour/each and consists of:

- Batch neutralizer/bleacher;
- Vacuum batch deodorizer, carbon steel construction;
- Fresh water cooling system with 2 cooling towers.

The old refinery has a capacity of 10 tonnes per day and is the same design as above. It is no longer in operation. The vacuum system has been cannibalized. Also the cooling system, which use sea water, is corroded.

The refined oil is stored in 7 tanks with a capacity of 100 tonnes each. These tanks are used as a stockpile when the plant is producing crude G/N oil for export. The plant produce some 3 to 4,000 Mt of refine oil per year. The oil is sold in drums of 200 liters (95% of production) or in plastic bottles of 1 liter (5% of production)

Bottling Plant

This is a very primitive arrangement, which was not inspected during the study fieldwork, consisting of a manual filler located above a scale, with a manual capsuling machine used to fill the one liter bottles.

2. CAPACITY AND OUTPUT OF THE PLANT

Groundnuts reception

Total Capacity is: River: 500 tonnes per day on 3 lines; Road: 100 tonnes per day on 1 line

These capacities are based on a 16 hour day. It would be possible to discharge over 24 hours, but mooring space at the discharge wharf is a limitation. With the current problems being experienced by GRTC, there is at the moment never more than 2 or 3 barges at the site at the same time, resulting in an under-utilization of the available capacity.

Decortication Plant

The SAMAT machine has a design capacity of 2.25 tonnes per hour of undecorticated groundnuts. By modifying the transmission of the machine, this capacity has been increased by 20 percent. Operating 7 machines in 3 shifts gives a total capacity of 450 tonnes per day producing 300 tonnes of kernels and 150 tonnes of shells.

There is room in the decortication plant to install a line with the same capacity. The machines required to do this are available in the plant, appear to be in good condition, and comprise:

- at Oil Mill #1, 4 SAMAT and 2 Petersens;
- at Oil Mill #2, 3 SAMAT.

Thus with appropriate maintenance the capacity of the decortivating line could be duplicated. This would require some additional investment in items such as conveyors, fans, cyclones, etc. An advantage of increasing decortivating capacity would be to allow the mill to be operated on a continuous basis, using one decortication line for the oil mill while the other could be used whenever a shipment of export kernels was required.

Conveyor to oil mill #1

The Belt conveyor has a nominal capacity of 400 tonnes of kernels but it would be easy to increase its speed.

Press Plant

Each LC prepress machine, duly, with proper maintenance, could process 70 tonnes per day of kernels for a total processing of 210 tonnes per day of kernels with 50% oil. This would produce:

- 78 tonnes of first pressing oil;
- 130 tonnes of meal with 18% oil going to the second pressing stage;
- 2 tonnes of losses and moisture difference.

For the second pressing, the capacity of each line is more difficult to estimate, because of different sizes of cookers and machines in each line. Constraints in the second pressing stage will automatically limit the capacity of the upstream first press stage. However, total production of oil, including first and second pressing can be estimated as follows:

- total kernels processed is 210 tonnes per day;
- oil at 43.5% processing efficiency equals 91.35 tonnes per day;
- cake at 55.5 efficiency equals 116.55 tonnes per day;
- the residual of 2.1 tonnes per day equals the milling loss of 1 percent.

In practice the plant never runs continuously; machines break down, and the average production of the plant in 1987, with 2 lines in operation, was 55 tones of oil and 70 tonnes of cake per day. Some typical operating results are shown in Attachment 4.

Possible Capacity Expansion of the Press Plant

It would be very feasible to increase the plant pressing capacity. There are basically two options.

One way would be to recuperate one or two of the LC prepresses from oil mill #2 and install them at oil mill #1. This would permit the processing of all the kernels from the decortication unit working at full capacity. 5 LC presses in parallel (one could be on stand-by) would process 300 to 350 tonnes of kernels per day.

The eight second press machines from oil mill #2 could be installed also, but it might be better just to look into increasing the speed and efficiency of the second pressing machines in oil mill #1, particularly the E press which seems to be underutilized.

The second option would be the installation of a solvent extraction plant. In this case the LC prepresses would be used as under the first option and in addition the E press would be converted from second pressing to a prepressing operation. The resultant prepress capacity would be 350 tonnes of kernels, producing 215 tonnes of meal with 18% oil, which would therefore be the capacity of the continuous solvent plant. The unit would produce cake with 1% oil residual.

Refinery and Bottling plant

The total production of refined oil is between 3,000 to 4,000 tonnes a year. This corresponds to operating the new refinery 200 days/year in 2 or 3 shifts. There is scope for additional production by running 300 days at 3 shifts/day, which would produce 6,000 tonnes per year. This capacity could be increased by 50% if the old refinery was put back in operation.

As far as the bottling plant is concerned, only 5% of the oil produced is sold in plastic bottles. This equates to a maximum of 200 tonnes a year, which is approximately 220,000 bottles a year, or, with a 200 days operation (the same as refinery), 1,100 bottles a day. With one 8-hour shift, this corresponds to 138 bottles per hour or a little over 2 per minute. If the volume of bottled oil were increased to the 6,000-9,000 tonnes a year level, a volumetric filler of the simplest type should be installed.

Handling of crude oil

The capacities of crude oil storage are satisfactory at 1,000 MT of crude oil and 700 MT of refined product with an additional 5,000 tonnes of crude oil storage at the port. What is lacking is adequate monitoring and control between quantities transferred from one series of tanks to another. To remedy this a batch scale should be installed in the press plant to control the total production of crude oil, and a volumetric indicator installed at the entrance of the refinery.

3. COMMENTS ON WASTE AND LOSS IN THE PLANT

The plant was not in operation during the study fieldwork and it is, therefore, difficult to identify exactly where losses occur. The following observations can, however, be made:

- in the decorticating plant it was verbally reported that the oil content in shells is around 2%. Good practice would suggest an oil content level of no more than 1.5% oil in shells. The additional loss occurring corresponds to 750 kg/oil per day. This oil is burned in the boiler where it generates sticky components on the tube bundles. It is, however, possible that the loss is greater. A laboratory analysis of oil in shells was not available. In an IRHO report in 1978, a loss of 13% oil in shells was reported at Oil Mill #1;

- the shells, could be better utilized. The plant burns only the shells strictly necessary to generate its own steam and electricity. As a result some 40% of the shells produced at the plant are dumped, as well as all the shells produced at the Kaur decorticating plant upstream;

control over the flow of products is inadequate. It is difficult to record the exact quantities processed in each section because of the lack of accurate weighing of products flowing from one section to another. In particular, the scale measuring the flow of kernels going from decortication to the oil mill is not operating. According to the mill management, one reason for this is that the design of the scale bucket did not evaluate exactly the specific weight of the kernels because of the presence of residual shells with kernels. The conveyor system linking the two sections of the plant is a very expensive piece of equipment. The cost of a good operating scale is very little compared to the overall investment. This situation should be remedied at once;

- the same holds for the oil produced in the press room since there is no batch scale in the oil line.

- although a double pressing operation is a good way to process peanut, more attention could be paid to the operation of the first pressing stage. The meal produced likely has a high oil content, probably around 22%. It should be 18% in order to allow the second stage press to operate efficiently. No analysis is conducted on the oil content between the two sections of the press room.

The oil loss in the mill is estimated at 1%, approximately 1 tonne of oil/day. Commensurate cake loss would also be 1 tonne per day. However, with no facilities for measurement and reporting, these figures will always be notional and not subject to corroboration. It is understood that the EEC provided an expert to review the reporting procedures in the oil mill. His work has been interrupted due to illness and it is not yet clear what recommendations have been made.

As regards losses in the refinery, the oil going to processing has an acidity of 0.6 to 0.7% FFA, and the refining loss should be around 1.5%. The loss could be closer to 3.5% in the form of soapstocks. These soapstocks are later sold to the local soap factory. A soapstock continuous separator (centrifuge) should be installed to reduce losses and increase capacity. Moreover, the bleaching clays used in the process contain approximately their weight of oil once

discharged from the filter press. This corresponds to a 1.5% additional loss, (with a solvent plant those clays could be reprocessed together with the extracted cakes to recover the oil). The total refining loss could, therefore be around 5%, or 1 tonne of oil per day.

Poor storage conditions of the bags in the covered sheds are undoubtedly the cause of a lot of cake losses. Although not part of this study, considerable losses also occur with high levels of aflatoxin (very often over 200 PPM) which results in greatly reduced prices realized for exported cakes. GPMB is considering installing an aflatoxin treatment plant (ammonia and pressure processing). The best defense against aflatoxin is in the field and with proper storage conditions. However, if problems of transport and lack of proper ventilation in the storage area are not resolved, a costly aflatoxin meal treatment plant may be unavoidable. Irrespective of a final decision, immediate measures can be taken to improve current conditions such as ensuring the drying of wet groundnuts received from the barges.

Together with material flow control, another area that requires immediate attention is the quality control laboratory located at the plant. The facilities available are very limited and the qualified chemists operating it have very little involvement in the actual running of the plant. In particular a modern soxhlet system, a quick moisture reading system, an aflatoxin measurement system, and an FFA quick measure system are needed. A modern laboratory does exist at Kanifing, but this of no help in the day-to-day running of the plant.

ATTACHMENT #1

GENERAL LAYOUT OF FACTORY



TRANSIT STATION		CONSTRUCTION DEP		OFFICE		RESIDENCE	
17	Guard Room	36	Covered Store	42	G/N Store	61	Dwelling House
18	Office	37	Office/Store	43	G/N Store	62	Dwelling House
19	Covered Store	38	Workshop	44	Cake Store	70	Refined oil tanks
20	Transformer	39	Store	45	G/N Store	68	Open space
22	Decorticating Mill	40	Guard Room	46	Decorticating Mill	70	Weigh bridge
23	Covered Store			47	Crushing Mill and	72	Workshop
25	Store			48	Turbine Plant	73	Workshop
26	Stand-by Gen'g			49	Crude Oil tank	74	Workshop
27	Q/C Office			50	Crude Oil tank	75	Workshop
28	Store			51	Workshop	76	Workshop
29	Workshop			52	Refinery (old)		
30	Workshop			53/54	Boiler Plant		
31	Fuel pump			55	Guard Room		
32	Q/C Office			56	Office		
				57	Store		
				58	Crude Oil tank		

ATTACHMENT 2

SPECIFICATION OF BOILERS

Weight of G/N Shells	50% capacity 1353 kg/hr	75% capacity 2003 kg/hr	100% capacity 2636 kg/hr
Efficiency of G/N shells, 3929 Kg/cal/kg	76%	77%	78%
evaporation kg/hr	5,194	9,291	12,398

The boiler can also burn fuel oil, 10,898 Kcal/kg at 50% of the capacity of the Boiler.

Currently, the plant operates one boiler only at approximately 36% of its capacity giving 4500 Kg/hr of steam for process and generating approximately 0.6 MW. Consequently only 60% of the shells produced are burned, the balance is dumped. The plant is equipped with one Complete Condensing Turbine Capacity 1500 KW, HEN 18/195. There is also space to install a second Turbo-Generator set.

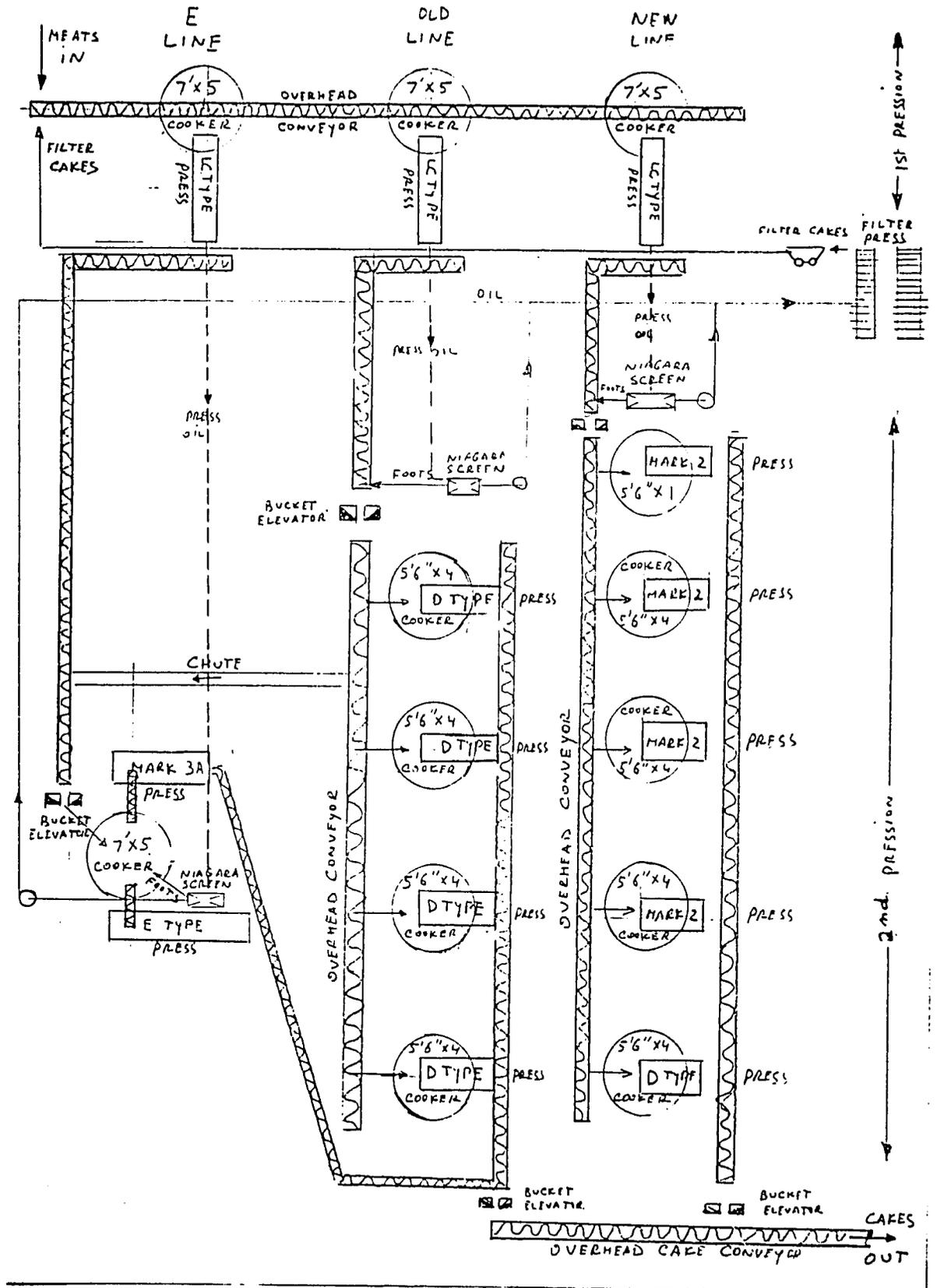
Serial T5/58988 WH Allen
Steam Inlet Pressure: 261 PSIG
Steam Inlet Temperature: 662 Deg F.
Exhaust : 26" Hg.
Speed : 9500 RPM

Turbine Condenser
Tube plates: Rolled Naval Brass
Tubes : Aluminum Brass

Sea Water cooling Flow : 2100 GPM
Inlet temperature : 90 Deg. F.
Outlet temperature : 105.1 deg F
Pressure loss : 7.9 PSIG

Through one Allen Gear Box 9500/1500 RPM. The turbine moves one Alternator Peebles Parsons.

One two pole Curtiss Wheel
Five Rateau Stages
Output: 1500 KW
Power factor 0.8
Voltage: 11,000 Kv.
Amp. Output : 98.4
No. of phases : 3
Frequency : 50 Hz.
speed : 1500 RPM



2

ATTACHMENT 4

TYPICAL OUT-TURN ANALYSIS: 1986/1987 SEASON

Date	G/N to Decorticator	G/N Kernels	G/N Cakes	G/N Oil
15/6/87	178,8 MT/3 shifts		65.2 MT	52.8 MT
	72.85% kernels	4.47% shells (in kernels)	4.45% H2O	0.69% H2O
		4.75% H2O	5.11% Oil	0.617 FFA
		48.73% Oil		
14/6/87	182.5 MT/3 Shifts		72.4 MT	57.3 MT
		4.72% (Shells in kernels)	6.54% H2O	0.55% H2O
		49.69% Oil	4.25% Oil	0.7% FFA
13/6/87	172.0 MT/3 shifts		68.4 MT	52.5 MT
	74.11% kernels	5.47% (shells in kernels)	4.96% H2O	0.63% H2O
		5.19% H2O	6.3% Oil	0.59% FFA
		49.14% Oil		

Note: Figures based on the operation of 2 lines, E line was not in operation at the time for maintenance reasons.

Source: GPMB Oil Mill Management

THE OIL MILL POWER PLANT

The shells produced by the decortication plant are used to fuel the two boilers. At 80% capacity, the boilers will each generate 10,000 Kg/hr of steam by each burning 2,130 Kg of shells/hr. This steam generation is capable of producing 2.6 MW of power.

If the oil mill was operated at the nominal capacity of decortication, i.e., 35,000 tonnes of kernels/year, the total energy usage would be 0.9 MW. Current energy demand is equivalent to 0.6 MW. The projected detoxification plant will require an additional 0.4 MW.

On the other hand, the installation of a solvent extractor will result in a drastic drop of electricity consumption, cutting the energy usage from 0.9 MW to 0.7 MW. In view of the demand for electricity in the Gambia, this would suggest duplicating the generator set in the power station to utilize the free energy available in the form of G/N shells.

An interesting option would be to send pressure steam to the still operationable, but idle, turbo generator set of plant #1. It is equipped with an Allen Turbine and a General Electric Generator of 0.7 MW. The machine is equipped with synchronization gears to interconnect it with the network.

We understand that this generator did operate till the end of 1987. The condenser and the sea water circulating pump are damaged and could be overhauled. The total energy produced by these two existing generators would thus be $1.5 + 0.7 = 2.2$ MW, which is still less than the potential energy of the steam generated by the two boilers. Considering the present consumption of 0.6 MW of the plant, this leaves MW 1.6 available for sale to the GUC network. (Attachment I gives details of the energy account for various capacities of plant operation.)

There is a proposal (at an estimated cost Pounds Sterling 510,000) to supply all required potential relays and synchronization gears to allow interconnection with the grid.

GUC currently operates:

- 2 diesel sets of 3.4 MW each, producing in practice 6 MW;
- 1 diesel set of 6.0 MW, producing in practice 5.7 MW.

Peak power demand is currently 10.8 MW which generally occurs in November/December in the early evening. The annual low is 5.8 MW, which occurs in August/September. The system load factor is 0.55. GUC has fairly firm plans for the expansion of its generating capacity, with the addition of one new set of 3.4 MW in the next financial year, the rehabilitation of the 6 MW generator in one year's time, and the provision of a 6.5 MW generator in 1990/91.

GUC fuel costs as at November 1988 were D0.836 per liter; i.e. D.167.20 per barrel (US\$24 per barrel).

A consultant with the US Dept. of Energy indicated that one 3.4 MW generator requires:

6 barrels of oil/hour
with a heat rate of 25%.

8 barrels of oil/hour
with a heat rate of 33%.

Taking the latter figure, at a running level of 6,000 hour/year at 24 US\$ barrel, gives an annual fuel cost of \$1,152,000/year. The GPMB facility potentially could therefore provide fuel cost savings of US\$500, 000 or more per annum.

GUC charges for industrial use 1.09 Dals/KWH
domestic use 0.67 Dals/KWH
agricultural/government 0.67 Dals/KWH

the rate increases from this level:

for the next 1,000 KWH to 0.82 Dal/KWH
for the next 1,000 KWH to 0.95 Dal/KWH

until reaching the industrial rate of 1.09 Dal/KWH.

GUC has offered only 0.10 Dals/KWH for the power generated by GPMB. GUC feels that even if GPMB was interconnected on its network, they would have to provide the capacity to cover GPMB's needs which would not therefore not create any savings to them.

ATTACHMENT I

ENERGY ACCOUNTS FOR DIFFERENT CAPACITIES

	A	B
4.1. - <u>Input</u>		
Undecorticated G/N	65 000 T per year	120 000 T per year
4.2. - <u>Electricity</u> <u>Necessary</u>		
Offices and maintenance workshop	400 KWH	600 KWH
Boilers	900 KWH	1700 KWH
Oil mills	2500 KWH	4300 KWH
Losses	100 KWH	200 KWH
	<u>3900 KWH</u>	<u>6800 KWH</u>
4.3. - <u>Steam necessary</u>		
Oil Mills	18 000 T per year	33 000 T per year
Turbines	27 300 T	47 600 T
	<u>45 300 T</u>	<u>80 600 T</u>
4.4. - <u>Shells output</u>	14 300 T	26 400 T
4.5. - <u>Steam production</u>		
With shells	47 000 T	87 000 T
With fuel-oil	950 T	950 T
Make up amount with fuel	----	----
4.6. - <u>Combustible</u> <u>necessary</u>		
Shells	14 300 T	25 000 T
Fuel	100 m ³	100 m ³

	A	B
<p>4.7. - <u>Boilers</u> Capable to burn both shells and fuels</p>	<p>capacity 10 T per hr 16 bars - 350° C.</p>	<p>Addition of a new one of the same capacity.</p>
<p>4.8. - <u>Turbines</u> and electricity network</p>	<p>turbine 800 KWH</p>	<p>The same turbine will produce 1415 KWH.</p>

Source: IRHO - Paris, Study on GPMB, October 1978

ANNEX 8

1987/88 OIL MILL OPERATIONS

Start up date: December 15, 1987 - Cutoff date: November 15, 1988
Maintenance: November 15, to December 15

Because of lack of material, the plant was stopped around October 20, 1988, and the maintenance period was advanced. Plant should soon be restarted on "mopped up" G/N coming from upstream. We understand that some 8,000 tonnes are still to arrive at the plant.

50,000 tonnes of groundnuts have so far been decorticated, producing 35,000 MT of kernels, of which 25,000 MT were processed in the oil mill, the residual (10,000 tonnes) being exported.

Plant Production 1987/88

	<u>Crude Oil</u>	<u>Cake</u>	<u>Equivalent Kernels</u>
January	1,032	1,630	
February	1,316	1,752	
March	450	861	
April	869	1,147	
May	1,041	1,057	
June	935	1,213	
July	706	843	
August	525	773	
	6,874	9,276	16,150
August to October	2,900	4,600	7,500
TOTAL	9,774	13,876	23,650

AREAS FOR OIL MILL EFFICIENCY IMPROVEMENT

The following recommendations are made to improve the technical efficiency of the plant.

1. Product Losses

- update all existing and install additional scales, especially a new belt scale with integrated weighing, to check the amount of material fed to the oil mill. Also facilities are required for weighing of crude oil produced by the press plant and that piped to the refinery (digital reading and compensation system for temperature variation);
- reduce loss of materials in all sections of plant by welding chutes and tightening all flanges and replacing packings.

2. Product Quality

- update laboratory equipment and speed up analysis in all intermediate sections of the plant. Systems should be installed to permit the monitoring and control of:
 - (a) oil content in shell from dehulling in order to adjust the operation of the decorticating machines accordingly.
 - (b) oil, moisture and fiber content of kernels sent to the oil mill and adjust operation of the cookers and press accordingly.
 - (c) oil content of meal between first and second pressing and correct operation of first stage pressing.
 - (d) oil content of extracted cakes to adjust operation of the second stage pressing accordingly.
 - (e) FFA content of the oil before refining to calculate exactly the amount of soda required in the refining.
 - (f) the degree of color required in the finished oil. A Livibond should be installed in the laboratory. Finished oil was inspected from different tanks, and it was all a different color.
- reduce the number of machines in operation for pressing, for example by converting some of the LC machines unused in oil mill #2;
- improve preparation of kernels before press by installing a five high roll in order to open oil cells before the first press expellers to improve their operation;

- pelletize the meal produced by the plant in order to enhance the possibility of shipping it in bulk. Although the port facility permits only bag handling, this should be looked into;
- address signs of erosion which are notable in the cookers and several sweep arms which are reported to break during operation. Cleaning of grits should be improved and better magnetic separators should be installed in the conveying system;
- install a small centrifuge in the refinery (a used Sharples AS 16 or AS26 would do perfectly), in order to separate the soapstocks and reduce the overall refining loss.

3. Energy

- burn all the shells produced in the plant and generate electricity to be sold to GUC after interconnection of the plant network with GUC grid. The shells separated at the Kaur plant should be ferried by river and burned in the plant boilers as well;
- more radically, consider abandoning the site at Kaur altogether and concentrate all the dehulling at the Denton Bridge plant, having in view the generation of as much energy as possible in the plant;
- although generation of steam and production of electricity is not a problem at the plant, conduct an overall energy audit of the operations. All electricity saved would be sold outside;
- conduct a study on the pelletization of shells stored before the boiler in order to improve their handling.

4. Communications

- improve communications within the plant by equipping main sections with Walkie-Talkies.

5. Maintenance

- review maintenance procedures especially as far as rebuilding of mechanical press shafts and worms is concerned. At present no such work is performed in the plant and these parts are simply scraped and replaced by complete new shafts and worms. As an example of the waste this entails, LC prepress shafts that last only one and a half seasons and Mark II and D presses' lasting half a season, which anywhere else would be recharged, are simply scraped. Techniques of welding hard alloy should therefore be introduced to reduce the current considerable drain of foreign exchange on press spare parts;
- re-equip existing workshop up-to-date machines that could be acquired second-hand very cheaply from Europe or the US.

OIL MILI. MANNING LEVELS*PRODUCTION

Shift Detail:

Mill:	Foreman	1	
	First operator	1	
	Operators	6	
Decortication:	First operator	1	
	Operators	3	
Power Plant:	Supervisor	1	
	First Operator	1	
	Operator	3	
Refinery:	First Operator	1	
	Operators	3	
Filter Press:	Operators	3	
Shift Maintenance Team:			
	Mill Fitters	3	
	Electrician, Chief	1	
	Aids	2	
	Welders Chief	1	
	Aid	1	
	Machinist	1	
	Weigh Bridge Clerk	1	
	Greaser	1	
	Time Keeper	1	
		<u>1</u>	
			36 x three shifts 108

MILL MAINTENANCE

Working on time basis:	Foreman	1	
	Welder	2	
	Fitters	<u>7</u>	10

POWER PLANT MAINTENANCE

Supervisor	1	
Assistants	<u>4</u>	5

MISCELLANEOUS

Mill Workshop		
Plumber/Fitters	2	
Machinist, Senior	1	
Welder, Senior	1	
Electrician, Senior	1	
Carpenter	1	
Mason	1	
Drum Filling Station	2	
Filter Cloth Washing/Repairs	2	
Bottle Filling	2	
Produce Delivery	2	
Stores	3	
Record Keeper	<u>1</u>	19
 <u>ENGINEERING & ADMINISTRATION</u>		
Chief Engineer	1	
Senior Engineer in charge power plant and production monitoring	1	
Production Engineers: 1/shift + Refinery	4	
Maintenance Engineer Mill	1	
Maintenance Engineer Power Plant	1	
Administrative Assistant	1	
Secretary	<u>1</u>	<u>10</u>
Grand Total for the Plant		<u>152</u>

*In addition to these figures, GPMB contracts outside personnel for the reception and unloading of groundnuts in season.

ANNEX II

UNIDO GUIDELINES FOR ORGANIZATION AND MANAGEMENT
OF AN OIL MILL

V. Organization and management

Plant organization

A typical organizational chart for a plant with pre-expelling, solvent extraction, and refining is given in diagram 17. This chart has been drawn up to show key functions rather than relationships between functions. Clerical staff and operatives have been omitted.

For an oil-palm enterprise, the Managing Director will also have responsibility for the estate supported by agronomists and field staff.

Definitions of the responsibilities of directors are given below.

<i>Managing Director</i>	Overall operation and financial performance of the plant.
<i>Commercial Director</i>	Achievement of sales targets; supply of raw materials at realistic prices; transport.
<i>Financial Director</i>	Company accounts; preparation of budgets and comparisons with budgets; administration.
<i>Technical Director</i>	Achievement of production budgets; safety; quality control of raw materials and processed products; maintenance and repair; provision of utilities and technical services.
<i>Personnel Director</i>	Recruitment of management and staff; training; salary and wage scales; health; security.

The Factory Manager is responsible for the operation of the plant with managers responsible for materials, processing, and refining. Departmental supervisors are responsible to these managers as follows:

<i>Department</i>	<i>Responsibilities</i>
Goods inward	Receiving, weighing, documenting all incoming seeds, chemicals, and other raw materials.
Seed and meal stores	All stores and silos containing seeds, cake and meal, and maintaining their contents in good condition.
Materials handling	Movement of goods (seeds, cake, meal, packaging materials etc.) within the plant.
Pre-treatment	All pre-treatment of seed, including expelling; maintaining production schedules and quality.
Extraction	Solvent extraction of cake; maintaining production schedules and quality; solvent handling.

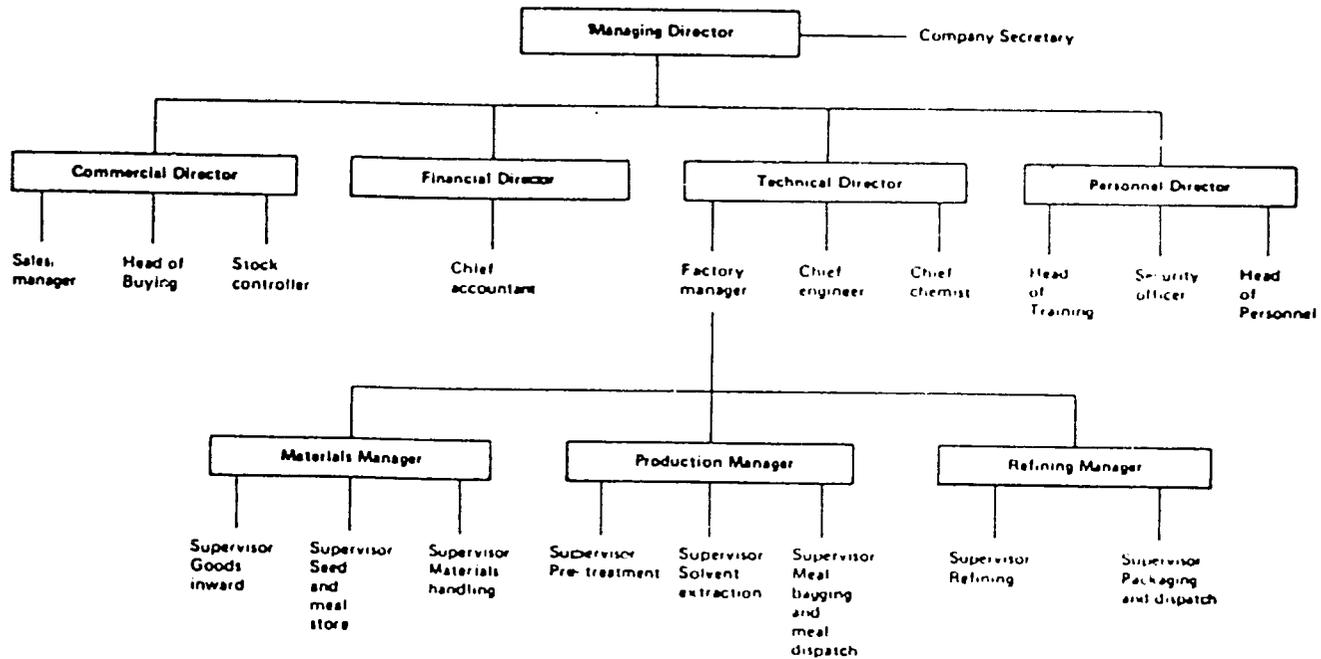


Diagram 17. Sample organizational chart
Pre-pressing, solvent extraction and refining

<i>Department</i>	<i>Responsibilities</i>
Meal bagging and despatch	Bagging of meal as necessary; despatch in bulk and bags; transport.
Refinery	Refining of crude oil from expellers and extraction.
Packaging and despatch	Packaging of refined oil into drums, cans or bottles; despatch of packaged refined oil; transport.

Skilled staff and labour are needed for all these functions.

Budget, cost accounts, production supervision and stock control

Budget and cost accounts

The annual trading budget

The annual trading budget is the Managing Director's key instrument to control the plant's performance (diagram 18). It is expressed in money terms for the financial year, and for each month of the year. The budget is built up from the following:

- Sales budget
- Raw-material programme
- Capital expenditure budget
- Operating cost budget

A budget for a longer period, say, for five years ahead, is also commonly prepared. This is revised each year taking account of changes in prices, costs and markets. The essential operating document is however, the annual trading budget.

	Total for the year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Sales													
Oil													
Meal													
Total													
Costs													
Fixed													
Operating													
Profit													

Diagram 18. Sample annual trading budget summary

Sales budget

This is prepared by the Commercial Director's staff some months before the beginning of the financial year. It is prepared both in volume and in value terms, for each type of oil, cake and meal to be sold, along the same lines as the market assessments described in chapter II. Great importance must be attached to the

forecasts made by major customers of their own requirements for the coming year, and special attention should be given to possible price movements. The sales force and overseas representatives should be used to gather customer information. The importance of a realistic sales budget cannot be stressed too often.

Raw-material programme

At the same time as the sales budget is being prepared, estimates of availability of seeds must be made. From this, a monthly programme of seed deliveries and of seed crushing can be prepared for each seed and in total. At an early stage, the seed programme should be related to the sales budget so that projected sales of each type of oil, cake and meal can be matched by the appropriate raw material. An annual summary is given in diagram 19.

Seed	Intake (tons year)	Husk (tons year)	Days worked	Seed (tons day)	Husk (tons day)	Oil recovered		
						Yield (%)	Daily (tons)	Annually (tons)
Husk-covered seeds								
Cotton-seed	44 500	17 050	191	233	89	18.3	42.7	8 165
Sunflower	17 400	6 950	69	250	100	27.0	68.0	4 690
Subtotal	61 900							
Linseed	3 700	—	28	133	—	40.0	(53.0)	1 480
Tobacco	1 000	—	9	111	—	39.0	43.5	390
Sesame	500	—	3	167	—	57.0	95.0	285
Total	67 100	24 000	300					15 010

Diagram 19. Sample annual raw material programme

Capital expenditure budget

A capital expenditure budget for the year is also necessary if expansion of the plant or additional facilities, such as a new packing line, are planned. These items can then be taken into account in calculating operating costs.

Operating cost budget

The levels of operation required throughout the year can be calculated from the sales budget, the raw-material programme and the capital expenditure budget and related to available capacity for each week of the financial year. From this information, requirements for labour, utilities and other operating costs can be drawn up on the same basis as in chapter II, and a month-by-month cost budget prepared.

Cost accounts

The purpose of cost accounts is to provide the manager of the plant with regular comparisons of actual costs, sales and profits, with budgets. If budgets are not being met, corrective action can then be taken.

The Accounts Department will normally prepare monthly and cumulative (year-to-date) statements of these comparisons by about 10 days after the end of each month. These are based on information collected from each department of the plant. The statements will follow the headings in chapter II and table 11 in as much detail as necessary. More frequent information will probably be needed on certain key headings (e.g. total sales).

Production supervision

Management responsibility for production is shown in diagram 17. The Production Manager will prepare an annual production programme, derived from the annual trading budget, as his overall control. The example in diagram 20 features the husk balance, supposing that husk is important as fuel for the plant; the exact headings appropriate to the programme depend on the individual seeds. If major changes (e.g. shortages of one seed) occur, the programme should be revised but revision is best avoided if possible.

Each supervisor will have his own weekly production programme, drawn up on the basis of the annual programme but adjusted to suit circumstances in the week concerned. He will submit regular (daily and weekly) returns of production and the consumption of raw materials to the Production Manager. He will also submit certain regular process information (e.g. temperatures, pressures) derived from the various instruments in his department. This information is used by the Production Manager for his overall control. Some of it is used also by other departments, for example, the Accounts Department, as a basis for operating costs.

	Days worked			Husk balance (tons)				Oil balance (tons)							
	Cotton	Sunflower	Linseed	Cotton	Sunflower	Total	Consumed	Balance	Cotton	Sunflower	Total	Edible total	Consumed	Balance	Stock
September															
October															
November															
December															
January															
February															
March															
April															
May															
June															
July															
August															

Diagram 20. Sample annual production programme

*Stock control**Stock levels*

Efficient stock control is important to the efficient performance of the plant for two reasons: (a) the need for continuous operation; and (b) the high cost of stocks.

Stock requirements

There must be sufficient stocks every day to meet the needs of the production programme for:

- Raw materials (seed etc.)
- Finished goods (oil, cake, meal, husks)
- Work in progress (cake for extraction; crude oil for refining)

For most seeds there is only a limited growing period each year and therefore money spent on storage can extend the processing season for the plant.

The cost of stocks

The working capital of an oil-seed processing plant is primarily needed for stocks of raw materials and of finished products. In case study 1, chapter VI; working capital is about one third of fixed capital, and this is typical. The cost of financing must vary with individual plants and interest rates; in case study 1, if interest rates were 10 per cent, interest charges on working capital would absorb about 20 per cent of the cash flow after year 2.

*Stock control procedures**Routine figures*

The daily figures of stock changes for raw materials and finished goods will go to the Stock Controller, Accounts Department, and to the Production Manager. The Stock Controller will be responsible for regular physical checks of stocks, and for periodic checks on the condition of seeds, cake, meal and oil in the stores.

Seed stocks

Physical methods of measuring seed stocks will vary according to the type of storage. The seeds in a silo can be measured from their level, allowing for their bulk density. In open warehouses estimates may have to be based on height and floor area. In either case, note should be taken of unsatisfactory storage conditions (e.g. abnormal temperature), possible deterioration and length of the period of storage.

Oil, cake and meal

Oil storage tanks shall be provided with gauges from which levels can be read. The same comments apply for cake and meal as made in the last paragraph for seeds.

Repair and maintenance

Staff

The management of repair and maintenance is the responsibility of the Chief Engineer. His staff should include the following:

- Supervisor
- Clerk
- Electrician
- Pipelitter
- Welder
- Plant mechanic
- Vehicle mechanic
- Carpenter
- Mason
- Painter

Management

It is usual to check the plant and do major repair work once a year during the annual shut-down. A schedule of inspection and maintenance throughout the year is also desirable. The maintenance programme for each plant must be worked out individually in accordance with its size and equipment. Routine maintenance should concentrate on certain items on which wear is heavy such as expellers, or on which wear is reasonably predictable, as those in refining. Much maintenance effort, however, will be concentrated on repair of faults (bearings, motors etc.) as they become apparent and affect production.

Budget

A budget for repair and maintenance must be prepared, initially based on the experience of the equipment suppliers and of the consultant. It should first be estimated for the year as time required for each skill and quantities of materials needed. These quantities are then valued and allowances added for overheads. Actual expenditure over each year is then compared against the budget, and as operating experience develops the budget is brought into line with the experience of the individual plant.

Quality control

The Chief Chemist is responsible for the quality standards of the incoming seed, and other raw materials; the seed, cake and oil at the intermediate stages of processing; and the finished products (oil, cake and meal).

He is assisted by one or more technicians, depending on the size of the plant, and should be provided with a laboratory.

Standards

The incoming seed must meet contract specifications. These specifications must be developed by the Chief Chemist to ensure that the seeds purchased are of the right quality to be processed to meet customer specifications for oil and cake.

Intermediate standards (e.g. for oil after expelling but before extraction) must be developed in the same way.

The finished products must meet the commercial specifications of the customers for oil and commercial analyses for cake and meal.

Test methods, such as those of the American Oil Chemists' Society, for oils must be established for each seed processed.

Laboratory

The basic supplies and equipment needed by the laboratory will include:

Glassware	Water bath
Burettes	Precision balances
Pipettes	Viscosity meter
Filter papers	pH meter
Litmus papers	Vacuum pump
Chemicals	Mixer
Corks	Vibrating sieve
Tripods	Water-distiller
Hotplate	Soxhlet fat measuring set
Bunsen burners	Keldahl's protein measuring set
Furnace	

Procedures

Samples of all incoming seeds must be taken and tested before acceptance and authorization of payment.

Routines for measuring and recording quality, based on the specifications, must be drawn up and followed.

SESAME PROCESSING

A meeting was held with Glenn Knapp, Agricultural Adviser of CRS. CRS has been promoting sesame as an alternative crop for Gambian farmers. The further expansion of the project is constrained by a lack of marketing outlets for production surplus to domestic requirements. The project could make available some 10,000 tonnes of sesame to GPMB, if GPMB were willing to crush the seeds. At the moment some 2,000 tonnes of sesame seed are processed at the village level, using expellers installed by CRS.

Technically there would be no problem in processing sesame at the GPMB oil mill. The process for sesame, which bears some 50% oil, is the same as for decorticated G/N kernels.

Prior to pressing, it is generally recommended that the seed be flaked before crushing and pressing. This requires fine operation of the deflaking equipment so as not to lose any oil content in the process. Some plants in Latin America process without prior flaking, however, with acceptable results. If double pressing is used, cold pressing at the first stage would produce an excellent quality edible oil.

It would probably be better to reprocess and cook the cakes between the first and second pressing. The use of an extruder would help in order to explode the unopened oil cells still present in the cakes coming from the first pressing. This machine is easy to operate and is not expensive to acquire (\$35,000). A machine with a capacity of 200 tonnes per day requires a motor of 100 HP, but energy is plentiful at the plant. The handling of sesame, because of its fineness, requires special attention. Lighters and barges should be made tight if the sesame is shipped in bulk to the processing plant. The discharge system from the barge would have to be modified, since sesame is a free flowing material. Tests should be carried out to find if it will hold on the inclined belt conveyors at the wharf discharge.

One tonne of Gambian sesame contains approx. 55% of oil on a moisture free basis. A typical material balance of one tonne of "as such" material, would be:

Oil	52.5%	=	525 Kg
H2O	5%	=	50 Kg
Meal	45.5%	=	<u>425 Kg</u>
	TOTAL		1,000 Kg

After double pressing the yield would be (ignoring processing losses):

50% oil	=	500 Kg
50% meal with 10% H ₂ O	=	475 Kg
and 5% oil	=	<u>25 Kg</u>

Total 1000 Kg

100

Therefore, the processing of 10,000 tonnes per year of sesame at GPMB could produce 5000 tonnes each of oil and cake. The refining of sesame oil is a very easy process. Physical refining would also work well. There is therefore complete compatibility between groundnut and sesame processing.

ANNEX 13

GPMB VALUATION OF OIL MILL

DENTON BRIDGE TRANSIT DEPOT	Depreciated Cost Value	Replacement (D.)	Remainder Useful Life	Equivalent US \$
2 No Boiler, Treatment Plant etc	20,000,000		40 years)	4,000,000
Turbo-Alt. Set	7,000,000			
Transformer	250,000			
Diesel Generator	350,000			
Single span bridge transit conveyer and power system	25,000,000		50 years	3,600,000
7 No Decort Machine	1,200,000		30 "	170,000
4 No Transit Main Conveyor system	2,300,000		30 "	330,000
5 No weigh bridges	350,000		30 "	50,000
Dredger	300,000		10 "	40,000
6 No screw augers	150,000		10 "	20,000
Pump house equip- ment and steam raising plant	250,000		20 years	35,000
Fire fighting equipment	75,000		10 "	10,000
Generator- Alternator Set	<u>125,000</u>		15 "	<u>18,000</u>
Sub-Total	D57,350,000			8,273,000
<u>DENTON BRIDGE MILL NO. 1</u>				
New Oil Refinery	2,000,000	40 years		285,000
Oil Oil Refinery	800,000	15 years		115,000
Refined Oil Tank Farm	2,200,000	30 years		315,000
Crude oil Tanks	950,000	35 years		135,000
Bottling Plant	1,400,000	25 years		200,000
Turbine Power House	2,500,000	10 years		360,000

Oil Milling Machines	1,200,000	20 years	170,000
Workshop Equipment	750,000	10 Years	110,000
Decortication Shed Equip	1,400,000	10 "	200,000
Sewing Machine	<u>50,000</u>	5 "	<u>7,000</u>
SUB-TOTAL	13,250,000		<u>1,897,000</u>
TOTAL REPLACEMENT VALUE	70,600,000		10,170,000

VALUATION OF OIL MILL
ON BASIS OF RESALE VALUE

<u>Denton Bridge</u> <u>Transit Depot</u>	<u>Resale Value</u> <u>US\$</u>
Power plant	1,700,000
Single span bridge transit conveyer	500,000
7 No. Decorticating machines	80,000
Sub-total	<u>2,280,000</u>

DENTON BRIDGE OIL MILL NO. 2

3 Filter Presses	3x3,500 =	\$10,500
2 L/C Presses, Less motors	2x7,500 =	\$15,000
8 MARK II Presses, less motors	8x2,500 =	\$20,000
6 Cookers P 5'6" 4 high	6x4,000 =	\$24,000
2 Cookers P 5'6" 1 high	2x2,000 =	\$ 4,000
2 Cookers P 7" 5 high	2x8,000 =	\$16,000
3 SAMAT Decorticators	<u>3x5,000 =</u>	<u>\$15,000</u>
Sub-total		104,500

DENTON BRIDGE OIL MILL NO. 1

New Oil Refinery		
Bleacher/Neutralizer		20,000
Deodorizer & Vacuum System		40,000
Filter Press & Pump & Valves		20,000
Cooling Towers		15,000
Tanks, Electricals		30,000
Sub Total		125,000

Oil milling machines

3 Expellers L/c	3x10,00	=	\$30,000
1 Expellers E type	1x15,000	+	\$15,000
10 Expellers 3A/D/II	10x2,000	=	\$50,000

3 Cookers Diam 7'5 high	3x8,000	= \$24,000
9 Cookers Diam 5'6" x 4	9x4,000	= \$36,000
1 Cooker Diam 5'6" x 1	1x2,000	= \$ 2,000
One lot of conveyors		\$50,000
3 Niagara Screens	3x5,00	= \$15,000
4 Filter Presses	<u>4x3,500</u>	<u>= \$14,000</u>
	Sub-total	\$ 236,000
Total Resale Value		\$2,745,500

GOTG PROGRAM FOR PUBLIC ENTERPRISE REFORM,
DIVESTITURE AND INVESTMENT PROMOTION

The Government intends to build on experience gained through actions undertaken during the first phase of the ERP to strengthen further the performance of a reduced public enterprise sector, to withdraw Government ownership and/or management from commercial ventures, and to promote private sector development. Ultimately no more than 7 enterprises will remain in the public sector

The objective of the second phase of the ERP is to move all public enterprises towards stronger financial discipline through greater discretionary control over their pricing policies and exposure to market pressures wherever possible. They are to operate without direct or indirect subsidies except in support of explicitly agreed public policy objectives. Implementation of this concept will be through the extended application of performance contracts, so that all wholly-owned public enterprises will be operating under the system by mid-1989.

As part of the performance contract implementation, resources will be provided from technical assistance by various donors for key areas of enterprise operations in order to achieve further gains in productivity, cost control, and financial effectiveness, including further divestiture of non-core elements of their operations.

Divestiture of government holdings in entirely commercial ventures will also be undertaken, utilizing the most appropriate modality individual situations: selling shares to partners, offering shares to the public, or outright sale based on competitive bids.

Finally, to promote a greater involvement of the private sector and foreign partners in the economy, several potential investment opportunities in the agricultural, industrial, and tourism sectors will be appraised and then promoted abroad for joint venture partnership with Gambian entrepreneurs.

Actions Taken to Date

- (a) Performance contracts were signed with the Gambia Utilities Corporation (GUC), Gambia Produce Marketing Board (GPMB), and Gambia Ports Authority (GPA). These incorporate tariff adjustments and further adjustment procedures, labor audits, in conjunction with internal reorganizations, and a requirement to prepare detailed quarterly reports to monitor implementation.
- (b) The National Investment Board (NIB) is now represented and active on the boards of all parastatals.
- (c) A diagnostic study of the Gambia Commercial and Development Bank (GCDB) has been completed, defining its future role and underlying operational and managerial changes.

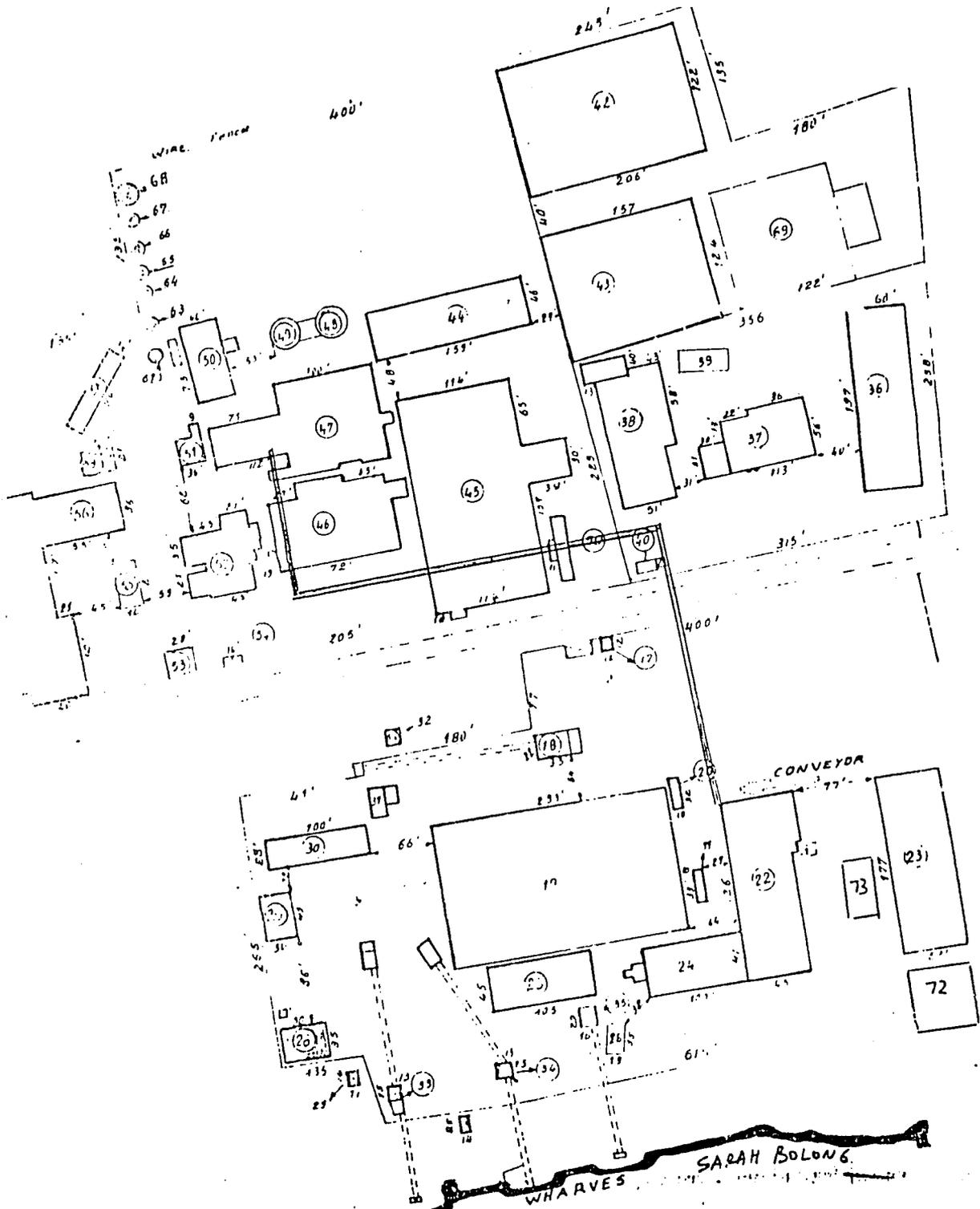
- (d) Discussions and negotiations aimed at divesting Government's holdings in the hotel industry have enabled Government to complete a lease/sell agreement for a major hotel.
- (e) Two commercial ventures have been divested completely, and divestiture of two others is currently under negotiation.
- (f) A revised Investment Code was enacted at end-1987.

Future Actions

The Government intends to expedite the reform program and anticipates further improvements in parastatal performance as well as contributions to growth through a substantially increased private sector participation in the economy. A detailed program of actions for 1988/89 - 1990/91, covering public enterprise divestiture, and investment promotion areas, has been prepared by the NIB. Under this, 3 new performance contracts will be introduced, and new targets for the 3 public sector enterprises currently under the system will be established. The speed of implementation will be accelerated, utilizing strengthened current resources and committed external assistance. Government's specific intentions are:

- (a) By December, 1988, GUC, GPMB, and GPA will have signed their second-year targets.
- (b) By July, 1989, the Social Security and Housing Finance Corporation (SSHFC), Gambia Public Transport Company (GPTC), and Gambia Telecommunications Corporation (GAMTEL) will have signed performance contracts.
- (c) By December, 1988, negotiations will have been concluded with joint venture partners in Banjul Breweries and African Hotel. Government also expects to have sold the Nyambai Sawmill, the Brick Plant, and Seagull Coldstores to private investors and the Old Atlantic Hotel to the lease partner in the new Atlantic Hotel.
- (d) By March, 1989, Government will have put on offer all shares of the National Trading Corporation (NTC) and Gambia National Insurance Company (GNIC).
- (e) By an as yet unspecified date, Government expects to complete action programs for divestiture of the River Transport Company and Ferry Services. These will be based on studies undertaken during the first phase of the ERP, and clear recommendations currently being sought from consultants on how to proceed with divestiture of these enterprises.
- (f) By October, 1988, Government intends to complete the valuation of assets of the Dockyard and the action program for its divestiture by May, 1989.

- (g) By September, 1988, the study of Management Options for the Kotu Workshop will be completed, with specific recommendations on the approach that should be adopted for improved utilization and Government's reduced financial commitment.
- (h) In mid-1989, Government will start studies on the Livestock Marketing Board (LMB) to determine its future role as a public enterprise ;and the opportunity for whole or partial private sector involvement. A similar study, under the performance contract exercise, will be undertaken for the GPMB.
- (i) The Government intends to complete divestiture of all non-groundnut operations of the GPMB during the second-year of GPMB's performance contract.
- (j) Investment opportunities drawn from potential ventures in agriculture, fisheries and tourism, based on appraised projects, will be aggressively promoted by NIB to foreign and local interests, to increase and further divestify the private sector.



TRANSIT STATION		TRANSPORT AND CONSTRUCTION DEP.		OIL MILL II° I			
17	Guard Room	36	Covered Store	42	G/N Store	61	Dwelling House
18	Office	37	Office/Store	43	G/N Store	62	Refined oil tanks
19	Covered Store	38	Workshop	44	Cake Store	68	Open secco
20	Transformer	39	Store	45	G/N Store	69	Weigh bridge
22	Decorticating Mill	40	Guard Room	46	Decorticating Mill	70	NEW TURBINE HOUSE
23	Covered Store			47	Crushing Mill and Turbine Plant	72	NEW BOILER HOUSE
25	Store			48	Crude Oil tank	73	BELT CONVEYOR AND BRIDGE
26	Stand - by Gen'pt			49	Crude Oil tank	74	REFINERY (NEW)
27	Q/C Office			50	Workshop		
28	Store			51	Refinery (OLD)		
29	Workshop			52	Boiler Plant		
30	Workshop			53/54	Guard Room		
31	Fuel pump			55	Office		
32	Q/C Office			56	Store		
33	Conveyor			57	Cake Store		
34	Conveyor			58	Office		
35	Conveyor			59/60	Water tank		