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FY 88 MADAGASCAR SECTION 206 PROGRAM:

VEGETABLE OIL SUB-SECTOR

March 27, 1988

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Acronyms

CASPIC	World Bank Industry & Trade Policy Structural Adjustment Program
CCCE	Central Bank for Economic Cooperation (French foreign aid bank)
CY	Calendar Year
DGP	General Direction of Plan (of the GDRM)
FAC	The Fund for Aid and Cooperation (French bilateral aid program)
FAO	Food and Agriculture Organization of the United Nations
FED	European Development Fund (of the European Economic Community)
FFPO	Food for Peace Officer (A.I.D.)
FMG	Malagasy Francs (local currency)
FOFIFA	National Center for Applied Research on Rural Development
FY	Fiscal Year
GDRM	Government of the Democratic Republic of Madagascar
HASYMA	Malagasy Cotton (parastatal)
HCT	Tananarive Central Oil Extraction Plant (parastatal)
IBRD	International Bank for Reconstruction and Development
IRHO	Institute for Research on Oils and Oilseeds (French)
IRRI	International Rice Research Institute
MAMISOA	Antsirabe soya extraction plant & oil refinery (parastatal)
MARS	Madagascar Agriculture Rehabilitation Support (USAID project)
MPARA	Ministry of Agricultural Production and Agrarian Reform (GDRM)
MRSTD	Ministry of Scientific Research and Technology for Development
MT	Metric Ton (U.S. short ton)
PDO	Project Development Officer (A.I.D.)
PDS	Project Development & Support (A.I.D. funds)
SEDES	Society for Economic and Social Development Studies (French)
SEIM	Industrial Enterprise Society of Madagascar (private refinery)

SNHU	New Tulear Oil Extraction Society (closed parastatal refinery)
SOAVOANIO	Parastatal coconut operation in Sambava (N.E.) region
SOMAPALM	Malagasy Oil Palm Society (Tamatave Parastatal)
UMR	Usual Marketing Requirement
Vegoil	Vegetable Oil
WHO	World Health Organization (of the United Nations)

I. Preface

1. The Mission (OAR/Madagascar) had planned a multi-year grant food aid program to begin in FY 1988 to continue support for on-going agricultural sector reforms in Madagascar in the spirit of the Food for Progress Agreement. As there was no projected need for U.S.G. rice in FY 1988, the Mission planned to bring in vegetable oil, by converting the annual Title I program, which had included vegoil in FY 87 and in three earlier years, to a multi-year Title II, Section 206.

2. Early justification for a Section 206 vegetable oil program was based on the following considerations:

   - Madagascar's continuing need for imported oil in the short to medium term;

   - the country's need for balance of payments support at the same time it was implementing important on-going agricultural sector policy reforms; and

   - increasing GDRM and multi-donor interest in packaging investments to <u>bring back</u> Malagasy local production of oil seeds, particularly groundnuts.

   This package of measures would include the revitalization of the private sector in the production of raw material, marketing, extraction, and refining. The specific role of the U.S.G. would be to support policy reforms in the vegoil sub-sector-- specifically price policy -- by an assured supply of oil over a number of years, while generating local currencies for investment in improving domestic production. Other donors would provide technical assistance and would support the foreign exchange costs of inputs, the reconditioning of mills, and other interventions in the sector.

3. In view of the situation which the design team found in March, 1988, however, the Mission now proposes a one year Section 206 program. The program request was modified from a multi-year to a single year program, and from $5.0 million to $3.2 million (transport costs included), for the following reasons:

   a) Madagascar's reduced need for vegoil in FY 1988. In April 1988 there was at least 8 months supply of oil in public storage;

   b) The Government's change in signals in rice price policy during the November-April hungry season due to the political pressures of the 1989 elections;

   c) The general lack of knowledge at this juncture of how best to address the constraints to increased oilseeds production and private sector marketing;

d) The failure of the Government to produce a vegetable oil master plan which would allow implementation of a multi-donor package of sectoral investments. This plan had been scheduled for completion by January 1988, prior to the design of a multi-year Title II Section 206 program.

5. In spite of these new conditions, it is the Mission's strongly held view that Madagascar's on-going general economic policy reform justifies a one year grant of Title II, Section 206 vegetable oil in FY 1988. A December 1988 evaluation of performance on self-help measures, and an assessment at that time of vegoil stocks, prices, and rates of sales, will provide the basis for an update of the FY 1989 P.L. 480 request and food aid strategy.

II. Background and Summary

Madagascar's oilseeds sector has deteriorated substantially over the past decade. In 1975, Madagascar produced 5,644 MT of vegoil, 87% supplied by groundnuts. The new socialist government then nationalized the sector, and today Madagascar is producing 3,500 MT of vegoil, mostly provided by cotton seed (not preferred by consumers), less than one-third of its requirements for edible oils. Between 1975 and 1984, groundnut production declined from 41,700 MT to only 17,300 MT, largely as a result of GDRM price controls which protected consumers, but created disincentives for production of raw material (mainly groundnuts). To avoid official price controls, producers began to sell their groundnuts on the parallel market; for example, in early 1985, official prices for groundnuts were only one-third of the parallel market price. In addition, foreign exchange shortages constrained access to high quality seeds, fertilizer, and other inputs. Extension efforts were directed towards cotton, and groundnut production fell, despite high parallel market prices. Though ex-factory prices were decontrolled in fall 1987 at the onset of FY 87 Title I auctions, maximum profit margins of 10% at wholesale and 15% at retail are still in effect for edible oils.

The economic viability of groundnut oil for domestic consumption was dependent upon the higher earnings obtained for the better quality part of production which was exported to France as luxury table nuts. Deterioration of groundnut quality has disadvantaged Madagascar in this export market, and it is unclear whether the country could now recover its former market share even with donor assistance to support improved access to inputs and extension.

Despite investments in oil palm and coconut plantations since 1976, production of these vegoils is still low, limited by ecological range. Mostly oil is of soap stock quality. After cyclone damage to Tamatave plantations in 1986, palm nuts produced only 700 MT of soap oil and 500 MT of edible oil; extraction of oil from the palm kernel inside the nut is no longer financially viable at these low production levels. Coconuts (copra) appear to offer more potential for oil production in the long run, though production is still very low at present.

A soybean processing plant with a capacity of 12,500 tons per year, MAMISOA, was opened in March 1986 in Antsirabe, but the extraction facilities are specialized for soybean, a crop unattractive to producers, with low oil content relative to other oilseeds cultivated in country. Negotiations between the GDRM and IBRD are expected to lead to plant closure in late 1988 or early 1989. The country's private sector extraction plants and refineries have deteriorated in most cases from lack of maintenance and reinvestment, as vegoil processing plants were not assigned a priority for access to scarce foreign exchange, except for investments in the new parastatal plants, MAMISOA and SOMAPALM (palm oil at Tamatave).

Cotton development plans have benefitted the vegoil sub-sector as the cotton seed by-product contributed 2,000 MT to annual domestic edible oil production, but it is unlikely that cotton production will expand further, as current levels are already adequate for domestic fiber demand. In fact, most of the cotton seed available for oil extraction in the Tulear area is already not being used, as the closest extraction plant in Morondava is already processing sufficient Tulear cotton seed to meet vegoil demand in its market area, and transport costs are currently too high to justify shipping the rest of the cotton seed to extraction plants in Majunga or Antananarivo.

Despite the 1988 gap between current domestic production (3,500 MT/year) and domestic demand (11,330 MT), the U.S. has been the only donor supplying edible oil to Madagascar since FY 83, through four past concessional sales of P.L. 480 Title I vegoil (FY 83, 84, 86, and 87) plus Title II vegoil grants in FY 81 and 84. A one year Title II, Section 206 Program is now proposed for FY 88 to support market liberalization and self-help measures to plan for reform of the vegetable oil sub-sector in Madagascar by importing $3.2 million in crude soybean oil (including sea freight) to fill the gap between local production, inventory now in stock, and demand, while providing balance of payments support.

As a first step in re-opening trade in imported vegoil to the private sector refineries, under FY 87 Title I, 50% of the crude soybean oil imported was sold through an auction system and 50% was reserved for allocation to parastatal refineries; overall 89% of commodities was bought by parastatals. Parastatal sales of refined product have lagged behind those of the private sector, and there is some evidence that parastatals are hoarding their stocks to keep profit margins up. Expanded market liberalization under Section 206 will be effected by channeling 100% of commodities through the auction, with improved auction rules to ensure that the four private sector firms and two parastatals (if MAMISOA is closed) compete on as equal a footing as possible.

On-going self-help measures include:

- GDRM commitment to preparation of a National Vegetable Oil Master Plan. This is a condition for release of the next $30 million tranche of the IBRD Agricultural Sector Adjustment Credit

- completion of a National Agricultural Research Plan (including oilseeds research).

The principal additional self-help measure is continued reform of the auction system as outlined above.

Additional self-help measures designed into the program include:

- completion of a survey of artisanal groundnut oil production to fill the gap in current knowledge of this share of local production

- continuation of feasibility studies on possible privatization of vegoil parastatals (especially the SOAVOANIO coconut oil refinery) with support from A.I.D.'s Madagascar Agricultural Rehabilitation Support Project.

Prospects for an increase in domestic vegoil production, and eventual self-sufficiency, are still poorly defined, and will depend in part upon re-establishment of correct pricing signals, inputs, and marketing networks (possibly including export markets for groundnuts). Until completion of the National VegOil Master Plan and National Agricultural Research Plan, it would be premature to program local currencies for vegoil production activities, but it appears that groundnut, coconut, and possibly sunflower offer technical potential for increase in smallholder production.

Though continued reform in the rice sub-sector must probably await the outcome of the late 1989 elections, a share of local currency generations will continue the intent of the Food for Progress Program by supporting continued FOFIFA/IRRI research on improved rice technologies, and improvement of small farmer irrigation schemes. Local currencies will also support the GDRM/IBRD action plan for Natural Resource Management. During a December 1988 evaluation of the FY 88 Section 206 program, a USAID/REDSO team will assess progress on self-help measures and, if possible, define a multi-year food aid program for support to domestic production increases in the vegetable oil sub-sector, including local currency support to other donors' technical assistance activities in oilseeds.

III. Critical Issues

The following questions are critical determinants of program design, and each is addressed in one of the analyses in Section III. C. of this program proposal:

A. In light of production deficits, low consumer purchasing power, and under-developed marketing networks, what is the probability of achieving cost-effective self-sufficiency in vegetable oils in Madagascar?

B. The GDRM's support for general macro-economic reform is fragile, and its level of commitment to market liberalization is suspect as evidenced by inconsistent performance in the rice sub-sector under Food for Progress. Within this context, has the GDRM adequately defined its goals in the vegetable oil sub-sector?

C. What role can A.I.D. play in the vegetable oil sub-sector, in view of other donors' activities and constraints on Mission resources?

IV. Program Description

A. Problem:

Madagascar's low level of per capita income ($265 in 1986), poor nutritional levels, dependence on commodity imports, and shortage of foreign exchange qualify the country for Section 206 grant assistance. For example, in 1987, over 50% of export earnings were needed to service external debt, and this situation is not expected to change in the near future. The potential for development and expansion of Madagascar's rich and diversified resource base is constrained by population pressures, logistical difficulties, the menace of cyclones and, from 1975 until recently, economic policies born of a political commitment to the doctrine of scientific socialism.

Low consumer purchasing power was exacerbated by devaluation in June 1987. Pork and beef fat have traditionally been an important part of the Malagasy diet, but reduction in real incomes has made it difficult for consumers to maintain their previous levels of animal fat intake, or to fully replace it with vegetable oil. Levels of per capita oil consumption in Madagascar are only 1 kg/year in comparison to the WHO minimum requirement of 2.5 kg/year. Madagascar's high rate of population increase (3%/year) requires major annual production increases or imports just to maintain current low consumption levels.

Madagascar's agricultural sector provides 80% of employment and total export earnings, and 40% of GDP. In contrast to the post-independence (1960) decade, when GDP grew at an average 3% per annum, the GDRM's 1972-1982 move towards a centralized economy was marked by increasing government interference in all aspects of production, manufacturing and marketing. Nationalization, expansion of public sector enterprises, restructuring of the agricultural markets (through various instruments such as price controls, subsidies, export taxes), and massive public investment have caused economic decline. Economic policies during the intensely socialistic period disrupted market mechanisms and increased balance of payment problems. The GDRM's historical move towards a centralized socialist economy has reduced incentives and broken down traditional (including smallholder) domestic production patterns for vegetable oils (especially groundnuts).

Though GDRM commitment to economic reform since 1981 has been uneven, there are now signs of GDRM willingness to define a viable role for the private sector in vegetable oils. Imports will continue to supply the bulk of domestic vegoil needs for many years; Madagascar's shortage of foreign exchange and balance of payments problems justify the use of Section 206 grant assistance for a one year concessional food aid program in support of market liberalization in the vegoil sub-sector.

B. Objectives

To satisfy Madagascar's vegetable oil import needs and to provide balance of payments support during FY 88, while assessing the prospects for long term self-sufficiency in edible oils. Program commodities will be sold through an improved auction process to ensure continued increase in private sector participation in refining and distribution. Self-help measures will set the framework for future domestic production increases. Local currency generations will support continuation of existing activities, especially research needed for increased agricultural production (primarily in rice), natural resource management, and repair of agricultural infrastructure.

C. Summary of Analyses

The first three analyses below address the critical issues identified as central to the program design process.

1. Sectoral/Technical Analysis

The GDRM's stated goal is edible vegoil self-sufficiency by the year 2000, but analysis of the sector reveals a number of constraints which will need to be overcome to achieve this goal. The critical issue here has been stated earlier in this program document as follows:

> "In light of production deficits, low consumer purchasing power, and under-developed marketing networks, what is the probability of cost-effective self-sufficiency in vegetable oils in Madagascar?"

At the core of this issue is uncertainty about whether production of raw material can be cost-effectively increased to produce vegoil at a price local consumers can afford.

Production of Raw Material

Of the various oil crops that have been traditionally produced or more recently introduced, each has its own set of advantages, constraints, and production problems (see Annex C). Many of the major elements needed for increase in raw material production in the vegetable oil sector must either still be put in place or rehabilitated. Plans for these investments are still poorly defined, though groundnuts appear to offer potential in the short term, and small scale copra production in the long term. Under-developed export and domestic markets, pricing problems, and low purchasing power are factors hampering vegoil self-sufficiency and economic efficiency of vegoil production in Madagascar.

Groundnuts are of interest because of widespread artisanal processing, ecological potential, smallholder acceptability, and a cultural tradition in Madagascar. In the past, Madagascar produced 54,100 MT of groundnuts in its best year (1976); a share of these (23,950 MT) were processed to produce 4,790 MT of oil. Thus, in the past, Madagascar's groundnut oil production has always been a by-product of the export and direct consumption markets for groundnuts. It is not clear whether Madagascar can regain its former share of the luxury table nut export market. Without these export earnings, refineries will be unable either to offer producers an attractive farmgate price compared to other substitute crops, or to produce oil in a cost-effective manner from the lower quality nuts remaining after the export-grade nuts have been traded.

Drastic declines in groundnut production are evidence that producer prices have not been attractive in comparison with competing crops. But locally produced vegoil, particularly groundnut, is already priced higher than most of the population can afford. To stimulate local groundnut production, farm prices must be raised to a level equal to or greater than other cash crops. Yet in terms of present consumer purchasing power, it appears this price hike to producers would put vegoil prices even farther out of the reach of the majority of local consumers. As a result, annual per capita consumption may remain at the current "low" level of about 1 kg, and caloric requirements will have to be made up from an alternative source. If this lower per capita level is used to project future demand, self-sufficiency could be more easily achieved; it might be preferable, however, for Madagascar to remain a net importer indefinitely, if vegoil could be imported at a lower price more within the reach of low income consumers. Even if the pricing question can be resolved for groundnuts, it may take several years to reconstitute seed stocks. Quarantine restrictions so far prohibit the massive importation of seed for immediate sale to farmers.

Cotton seed is the second most important traditional source of vegetable oil in the country, although it is not preferred by consumers in most parts of the country. As it is a by-product of the fiber industry, and as current levels are adequate for local fiber requirements, the production of cotton seed oil is not likely to grow, unless the Tulear extraction plant is reopened and used to process cotton seed now going to waste in the area for lack of processing facilities.

All recent oilseed research has focussed on industrial plantation crops (coconut and oil palms), though both perennials are limited to narrow ecological bands on the east coast of Madagascar. Of the two, copra is by far the better suited to small scale production, and outgrower satellite production models have been successful in other parts of the tropics. Preliminary trials on sunflower are underway, but it is too early to assess the potential of this oilseed in Madagascar.

Processing Capacity

Processing capability is not an immediate constraint to production. Although many of the mills are old, notable exceptions being SOMAPALM and MAMISOA, there is actually twice as much refining capacity in country (25-30,000 tons) as is presently being used to refine both imported and locally produced raw oil. There are, however, a number of investments in extraction facilities which deserve further consideration. A leading example is the consideration which the GDRM is now giving to re-opening the former SNHU extraction plant in Tulear to stimulate groundnut production and use cotton seeds now being produced as a by-product in the area. The closest extraction plant in Morondava is already processing sufficient Tulear cotton seed to meet vegoil demand in its market area, and transport costs are currently too high to justify shipping the rest of the cotton seed to extraction plants in Majunga or Antananarivo.

Marketing

Profit margins realized by refineries are not, for the most part, squeezed by competition with other suppliers. Markets are geographically allocated, and for the most part regionally segregated, as transport costs make it difficult for a factory in one region to compete in another factory's geographic area. Only in Antananarivo is there competition between public (HCT) and private sector (SEIM) refineries. Other regions are served by only one refinery, with the exception of Majunga, where two private sector refineries have divided the market between themselves. Isolated rural areas are served mainly by artisanal groundnut oil; industrially refined oil does not appear to reach these areas. In any event, there are considerable rural/urban differences in purchasing power, and oil is considered to be a luxury in the diet. Animal fat is a cheaper source of lipides for the rural diet, but is more expensive than oil in urban areas.

Framework for Future Assessment of Prospects for Increasing Local Production

The GDRM is already committed to on-going self-help measures, including final design of a National Vegetable Oil Master Plan and a National Research Plan for oilseeds which will clearly lay out prioritized activities. It would be premature to use the FY 88 program's local currencies in support of vegoil sector projects, but studies undertaken as part of this year's self-help measures may identify activities which might be supported by future food aid programs.

In 1987, the UNDP funded a sectoral assessment of vegetable oils in Madagascar, undertaken by a French consulting firm (SEDES). Although more descriptive than analytical, the SEDES study describes the general status of the sector and recommends points for inclusion in the GDRM National Vegetable Oil Master Plan. To complete this study, an IBRD review team in February, 1988, recommended that additional analysis be undertaken: (a) to assess the comparative advantage of producing and processing the different types of oilseeds cultivable in Madagascar; and (b) to prioritize thsat investments which must be made and the actions to be taken to finalize the GDRM Master Plan for Vegetable Oils. At the same time, FOFIFA is planning to complete its National Agricultural Research Plan by end of 1988. This plan will include oilseed research requirements. Upon completion of this plan the requirement for counterpart funds to support oilseed research will be better known. Meanwhile, a number of donors (FED, UNDP/FAO, FAC) are in the process of preparing plans to provide technical assistance for improvement o groundnut production. These plans should also be ready by the end of 1988.

The December 1988 evaluation of the FY 88 Section 206 program will provide A.I.D. with an important opportunity to review the results of the self-help measures including studies and plans. The timing of the evaluation will also permit A.I.D. with the GDRM and other donors to review the overall vegoil strategy in Madagascar which may provide a basis for programming future assistance to this sub-sector. If warranted, based on Mission review of the status of various developments as they stand in September 1988, the Mission will request PDS funds to support specialist expertise for this evaluation team, to ensure that all production constraints are adequately reviewed.

In conclusion, it is not clear at this time whether self-sufficiency in vegoil is a feasible or desirable goal, but the results of the planned studies should enable that question to be answered in design of FY 89 and beyond food aid programs.

2. Economic/Financial Analysis:

The following critical issue is addressed in this analysis:

> "The GDRM's support for general macro-economic reform is fragile, and its level of commitment to market liberalization is suspect as evidenced by inconsistent performance in the rice sub-sector under Food for Progress. Within this context, has the GDRM adequately defined its goals in the vegetable oil sub-sector?"

(a) Market Liberalization

During the past few years GDRM achievements at the level of macro-economic reform and overall government progress in market liberalization have been substantial and commendable. Measures include:

- Cumbersome, highly controlled administrative import procedures were temporarily replaced with a 'liberalized import regime', the RIL, itself currently being superseded by an Open General Licensing system (OGL). Beginning in July 1988, it is planned that importers will have unlimited access to foreign exchange for all classes of imports at the prevailing exchange rate. Additional Ministry of Industry authorization will still be required for vegoil imports.

- During the course of 1987 the GDRM eliminated restrictions on entry to the transport sector and removed transport tariff controls.

- Domestic prices on many consumer goods have been liberalized and controls on profit margins at the wholesale and retail level sharply reduced. Ex-factory price controls were eliminated for vegetable oil as well as for all but 5 products, which are still subject to control. Controls on profit margins at the retail level have been removed on all but 8 products; remaining controls are scheduled to be eliminated in June 1988 under the terms of the CASPIC Program. Maximum profits of 10% at wholesale and 15% at retail for vegetable oils were eliminated in January 1988 under the terms of the World Bank Industry and Trade Policy Adjustment Program (CASPIC).

- Liberalization of the financial sector is now a possibility as evidenced by GDRM agreement to allow the establishment of private banks by April, 1988.

pol. sensitivity of rice market: 1 reform.

Until late 1987, the most far-reaching and politically sensitive of the reform measures undertaken had been the liberalization of rice marketing. Steps included elimination of geographic marketing barriers, elimination of price subsidies, import restrictions, removal of ceiling prices and elimination of official distribution sales at below-market prices. As a result new traders entered the market, small mills sprang into existence, new distribution networks were created and farm-gate and retail prices increased. A key element in the rice reform program has been the buffer stock operation, established with USAID assistance under the Food For Progress program. This mechanism was designed as a temporary measure to prevent politically unacceptable price rises from occurring during periods of supply shortage by releasing rice when market demand pushed retail prices above an agreed-upon level. ? The effectiveness of the rice buffer stock mechanism (fueled by USG rice stocks) was demonstrated during the 1986-87 season, as buffer stock sales at the 460 FMG/Kg trigger price maintained market prices high enough to induce major production increases at the farm level (and intensified use of inputs), while protecting consumers from the exorbitant price increases of the previous 1985-1986 lean season.

Despite these successes, recent actions illustrate that the GDRM remains extremely sensitive to the political implications of liberalization, and in particular increases in consumer rice prices. Thus, although rice supplies were available during the 1986/87 period (production plus imports), the mechanics of supply and demand were never allowed to find a market equilibrium. During both 1986 and 1987, the GDRM continued to bring commercial and donor rice into the country, in amounts which exceed limits agreed upon with the World Bank, although not in technical contravention of formal agreements. Simultaneously, stocks from an abundant harvest accumulated and export operations were restricted. Finally, beginning in late 1987, a commercial operator, responsive to the interests of the ruling AREMA Party, has been willing and able to subsidize high volume rice sales at 360 FMG/kilo, suppressing market prices, damaging distribution systems that have developed since 1983, and thereby threatening to keep farm-gate prices lower in the 1988 harvests than the level generally considered necessary to provide an incentive to producers.

It is unlikely that the GDRM will undertake reform in rice marketing until after the Presidential elections, scheduled for mid-1989. That political imperatives have been allowed to outweigh economic considerations and that on balance the rice market liberalization effort has lost ground, should not, in the interim, detract from past achievements or other on-going reform efforts.

For this reason and in keeping with the intent of the Food For Progress program, the FY88 Title II Section 206 program has been designed to continue addressing structural constraints, albeit in a different agricultural sub-sector, while providing some relief for protracted balance of payments difficulties through concessional assistance.

(b) Relationship of Program to Private and Public Sector Enterprises

Over the years, direct takeovers and large-scale public investments have created a large and varied system of parastatals. They drain already limited financial and human resources, and interfere with the functioning of market mechanisms. Credit to parastatals accounts for more than 50% of the loan portfolios of the three state banks which exist in Madagascar. All are 100% State-owned.

In order to rationalize production and strengthen the financial position of the parastatals, the government has agreed to restructure the public enterprise sector through a program of rehabilitation, leasing, privatization and liquidation. Three of the seven refineries operating in the vegetable oil subsector are parastatals. They received 50% of the FY 87 Title I crude vegetable oil imports outright and purchased 78% of the remaining 50% sold through the auctions. In conformity with market liberalization, the proposed FY88 Section 206 Program will require that 100% of total commodity imports be sold at auction. In addition, specific measures have been identified (see Section V "Implementation Plan") which will allow for more equitable private sector participation. Through reliance on the auction mechanism for import allocation, the Title II 206 program will reduce the favored status of the public enterprise refineries. In addition, the largest and newest parastatal oil refinery, MAMISOA at Antsirabe, is likely to be closed down under an agreement with the World Bank.

Private refineries are disadvantaged in access to credit; a state bank is a major shareholder in each of the three parastatal refineries. Although auction procedures can be tightened so that the same financial rules apply to parastatals as well as private enterprises, the Section 206 program cannot have a direct impact on the allocation of credit. This may be addressed, however, under IBRD financial sector reforms scheduled to begin in 1988.

(c) Relationship of Program to Balance of Payments Problems

Since the early 1980's, Madagascar has attempted to meet its emerging debt crisis through a series of demand management measures (including reduction of imports) and substantial debt rescheduling. After rescheduling, the debt service ratio (1986) is still high at 51% and the balance of payments position remains unviable.

According to World Bank estimates, Madagascar will need minimum gross capital inflows of USD 450 million annually during the next three years at least to meet rescheduled debt repayments, support slightly increased import activities, and maintain a minimum acceptable level of foreign exchange reserves. Madagascar will require continued financial assistance from the bilateral and multilateral donor community, through grants, concessional borrowings and/or debt relief.

In view of the existing gap between local production of vegetable oil and the total food requirement (see "Food Needs Assessment", Annex C), Section 206 concessional imports are needed to reduce demand for scarce foreign exchange.

3. A.I.D. Capability/Other Donors

The critical issue addressed in this analysis is as follows:

> "What role can A.I.D. play in the vegetable oil sector, in view of other donors' activities and constraints on Mission resources?"

Other donors will support the foreign exchange costs and long and short term technical assistance needed for completion of the GRDM VegOil Master Plan, the FOFIFA Oilseeds component of the National Research Plan, and follow-on projects for increasing domestic production. A.I.D.'s role will be limited to: (1) provision of grant imports of crude soybean oil as balance of payments support, to fill the gap in current production; (2) monitoring and evaluation of policy reforms and self-help measures, in collaboration with the IBRD; and (c) joint programming with the GDRM of local currencies generated by sale of the Section 206 commodities in large blocks in support of IRRI-assisted rice research at FOFIFA, implementation of the GDRM Environmental Action Plan prepared with IBRD and A.I.D. assistance, and rehabilitation of small farmers' irrigated perimeters.

A share of local currency generations will be set aside to fund local consultancies and GDRM studies to monitor and provide information on the vegoil sub-sector. These consultancies will include:

(1) A semi-annual update to the current baseline study to monitor vegoil demand, production, import, price, and stock levels (see "Monitoring and Evaluation Plan"). This baseline study by Dinika, a local consulting firm, was funded by counterpart generations, to assess impacts of the FY 87 Title I vegoil auctions on pricing, profit margins, rates of sales and size of inventory in country. The final report will be released in April 1988.

(2) A survey of artisanal groundnut oil production and marketing, as this is a significant part of supply to low income consumers in isolated rural areas. As explained in Section IV. D. 2 "Self-Help Measures", no reliable information is currently available on artisanal pricing, volume or quality of production, or marketing networks.

The USAID/M PSC economist (expected to begin work o/a September 1988) will develop the scope of work for each consultancy, and will review and report on the findings in semi-annual cables to AID/W. The Mission economist is expected to have adequate time available for these tasks. The Mission's local hire PSC's will monitor commodities at port periodically as necessary. A REDSO/ESA Regional Commodity Officer will help the GDRM and the Mission prepare necessary documentation to invite competitive bids on the import contract and to establish improved auction procedures. In addition, a REDSO/ESA Food for Peace Officer will provide quarterly implementation assistance. REDSO will schedule a December 1988 evaluation team effort including PDO, FFPO, ADO, and economist, assisted by PDS-funded specialists as needed, to help the Mission to assess progress on self-help measures and to design the FY 89 food aid program. Counterpart deposits and the equity of the auction process will be tracked by a local audit firm, with costs paid by local currency generations. Results of audits, studies, and the evaluation under the Section 206 program will be reviewed by an Auction Commission chaired by the Ministry of Commerce with participation by USAID, the Ministry of Industry, the Ministry of Finance, and the Direction General of Plan. This commission was originally created for the supervision of FY 87 Title I auction sales.

FED, FAC, IBRD, and the FAO will provide technical assistance to the GDRM for policy studies, investment plans, and pilot projects in the vegoil sub-sector. Two years ago FED placed two resident advisors (an agronomist and a factory technician) at SOMAPALM to improve plantation and extraction plant management, and to introduce improved varieties and inputs; this assistance will be continued. FED is also building a new SOMAPALM extraction plant at Manakara. FED has provided assistance to SOAVOANIO coconut plantations for over 20 years, and is now funding a resident advisor and short term consultancies. Under FED sponsorship, the European Investment Bank has been appraising privatization potential at SOAVOANIO. The GDRM has also requested A.I.D. assistance in assessing privatization prospects for this integrated coconut oil production operation, and MARS-funded consultancies will complement the FED's efforts. Most FED technical assistance is provided by the French Institute of Research on Oils and Oilseeds, including introduction of hybrids with potential for doubling yields. FED also supports irrigated perimeters in the southwest near Tulear, in collaboration with IBRD, the Caisse Centrale and other donors, but FED is the only donor currently working with oilseeds. The FED is willing to work with HASYMA (the cotton parastatal) on groundnut production, and FAC, CCCE, and IBRD are all supporting HASYMA's work in cotton production.

FAC supports a resident advisor for groundnut and sunflower oilseed trials at FOFIFA, and has financed several consultant studies of groundnut oil production potential over the past three years. FAC and HASYMA are discussing possible collaboration on integrated production of cotton, maize and groundnuts. Reportedly, large cotton planters in the Majunga area might be willing to diversify into sunflower and groundnut production, if adequate seed stocks were available through HASYMA.

UNDP and UNIDO financed the SEDES Oilseeds Study; UNDP now plans to channel $1.3 million over the next 3-4 years for groundnut (and possibly sunflower) seed multiplication through the FAO, with final project design to be completed by May 1988. FAO is primarily interested in smallholders, hence its focus on groundnuts. Planned activities will include rehabilitation of MPARA's Maravoay seed station near Majunga, demand studies on seeds, and development of national policies for groundnuts and seed marketing (with the long term goal of privatization). A long term FAO advisor is already working with MPARA on development of the national seed multiplication plan under an on-going project that has received some P.L.480 counterpart support in past. Plans for the follow-on project are likely to include May-October 1989 rehabilitation of the seed multiplication stations, and possibly supplier credit to producers for seed purchases. The precise credit mechanisms are yet to be designed.

The CCCE has financed HASYMA cotton production ventures, and can provide long term refinancing of capital investments for the private sector to assist with GDRM divestiture of oilseed parastatals. The CCCE would be willing to finance groundnut development, but no official request for such assistance has been submitted by the GDRM.

4. Social Analysis

Rural-urban differences in the importance of vegoil in the diet are considerable, and are linked to geographic isolation and low purchasing power. Peasants in rural areas are producing at least 1,500 MT of artisanal groundnut oil, by MPARA estimates, but there is little concrete data on the importance of artisanal production or its quality. As animal fat is more affordable and accessible than refined vegoil in rural areas, lard and edible peanuts supply most of the lipides in rural diets. Most artisanal groundnut oil is probably paid for in-kind, rather than in cash, and some households are growing groundnuts only for their own consumption.

At average wage levels for salaried workers, one-tenth of the monthly wage for the head of household would need to be spent on vegoil, just to maintain current low levels of family consumption (1 kg per capita per year). Urban areas are adequately supplied with refined vegoil, which is priced lower there than animal fat, but in view of low purchasing power, consumers buy in very small quantities, usually only a spoonful at a time for the family sauce pot. In summary, two completely separate and non-competing markets appear to be operating in vegoils in Madagascar-- a traditional artisanal market in rural areas, and a modern market for refined oil in urban areas.

Traditional systems of supplying inputs for groundnut production have all but disappeared, and there is some uncertainty about whether they can be re-established. During periods of drought in the south (e.g. near Tulear), seed stock was consumed, and concerted efforts would be needed to build up supply again. In the pre-Socialist era, private sector refineries distributed seed stock, fertilizer, food, and consumer goods to producers, and established contract prices for their production during the lean period; these credits were then recovered with a share of total harvest purchased at the contract price.

Now refineries can only break-even when purchasing groundnuts at about 250 FMG/kilo, thus they are reluctant to accept the risks involved in providing in-kind seed credits, fearing that they may never be repaid as production contracts will not be honored by peasants who can obtain 300-600 FMG/kilo for groundnuts sold in the market for direct consumption. There are also signs of the breakdown of rural socio-economic norms; a significant portion of SOMAPALM palm nut production is stolen by workers each year for artisanal processing, and Malagasy peasants are frequently troubled by thefts of crops from their fields. The uncertainty of market liberalization, as evidenced by significant swings in producer prices caused by GDRM rice policy performance, are not encouraging peasants to take risks by varying production mix beyond household consumption needs.

Encouragement of the private sector also involves ethnic concerns. Historically, commerce was looked down upon in high plateau Malagasy society, creating a void filled by Chinese, Indian, and Pakistani entrepreneurs. The private sector oil extraction plants and refineries are owned by families from these ethnic groups that have lived for at least three generations in Madagascar, though the owners are assisted in many cases by Malagasy managers.

5. "Assessment of Former Food Aid Programs"

A. Food for Progress Program- The three year Food for Progress Program (FFPR) of 30,000 MT of rice began in August 1986; the first shipment of rice arrived in November 1986. The evaluation of first year activities was conducted in June 1987. The evaluation team concluded that the program was accomplishing its short-term goal of stabilizing prices for consumers in urban rice markets. In particular, the buffer stock which was established by U.S. food aid, through FFPR, contributed to opening up the sub-sector by making rice available to all licensed traders in the major consuming areas during the traditional period of rice shortage.

Problem areas identified by the evaluation team included the lowering of the buffer stock release price at the end of the first season of operation, and the failure to effectively publicize the higher price at which the program would begin operating for a second season in November 1987. This led to confusion over prices and did not optimize production and marketing of rice. The team also found that the stock was partly damaged from improper storage. All but 0.5% of rice imports under FFPR have since been treated and are fit for human consumption.

The team recommended that the buffer stock be continued with improved GDRM management including more open and consistent communication on prices. In addition, it was recommended that A.I.D. more closely monitor the program, particularly commodity storage. In view of the possibility that rice imports might not be needed, it was especially recommended that the Mission investigate providing other commodities under either Food for Progress or a similiar type of food aid program.

Since completion of the evaluation, events have shown that continued rice imports through a FFPR Program are not warranted. As indicated in Section IV.C.2. "Economic Analysis", the GDRM has not maintained its commitments in rice pricing, and substantial surplus rice has accumulated. As a result, the Mission proposes to suspend the FFPR Program and convert the former Title I Program to Title II, Section 206.

B. Title I - The U.S. has provided Title I concessional food aid assistance to Madagascar since 1981. During that time, performance on self-help measures has been adequately managed. However, the sale of vegoil commodities has moved slowly during FY 87, and as a result, local currency deposits have lagged.

The basic goals of the self-help measures were to improve the ability of the rural poor to obtain adequate food supplies and participate in increased agricultural production. Specific activities were of two general types: 1) improvements in irrigation and transport infrastructure; and 2) institutional support for research on rice production and improved data in the agricultural sector. In 1986/87, some 236,000 ha. benefitted from rehabilitated irrigation facilities funded by Title I local currencies and other donor contributions. Also during 1986-87, more than 10 projects relating to crop research and data collection were completed. The annual program review in December 1987 concluded that the GDRM had met the self-help measures.

The cumulative dollar value of Title I commodities programmed between 1981-1987 totals approximately $53 million. The GDRM has deposited the large majority of the local currency equivalent on a timely basis. The remainder is in the process of being deposited. A private firm (Price Waterhouse/Nairobi) audited the local accounting system in September 1987 and found the control of receipts, disbursements, and end use of PL 480 local currency funds reliable.

The one problem which the Title I program has encountered is slow disbursement of local currencies. The Mission has taken definite measures to address this problem by committing larger blocks for disbursement through other donors' projects, as well as by assisting the Ministry of Finance (Treasury) and the General Directorate of Planning to strengthen their offices which deal with P.L. 480 counterpart funds. This process will continue as may be required under the new Title II, Section 206 program.

D. Program Elements

1. Commodity Selection/Levels

Under the FY88 Title II 206 program, it is proposed that a total of 5,000 MT of crude, degummed vegetable oil be imported in 55 gallon drums. (For detailed calculations, see the "Food Needs Assessment" in Annex C.) The commodity level is derived as follows:

CY 1989 VegOil Requirement (refined)	11,330 MT.
Less: Local Production (refined)	(3,500 MT.) local prod.
Carry-over from CY 1988	(1,344 MT.)
Deficit -- refined	6,486 MT
-- crude (+10% -processing loss)	7,134 MT

The decision to import crude rather than refined vegoil was based upon several factors:

- existing refining capacity
- ability to strengthen private sector role in processing through self-help measures
- relative stability under storage conditions, in view of the uncertainty about the rate of sales
- lack of knowledge of private sector distribution networks for refined oil.

x 1989

The estimated crude oil requirement for the 12 months of CY 1989 is 6,486 MT refined. However, given the actual stocks of vegetable oil on hand as of April 1, 1988, of 8,107 MT combined refined and unrefined vegoil, the Mission requests an FY 88 program of only a five months' supply of crude vegoil to be consumed in CY 1989. At a cost of USD 512 per MT in 55 gallon drums plus approximately USD 143 per MT for freight, this amounts to a U.S. $3.275 million allocation.

Thus 5,000 MT will be auctioned in two or three tranches depending upon the stock situation, as monitored during the December 1988 evaluation. The estimated schedule for January, March, and July auctions in 1989 has been planned with a view to the timing of the harvest, the sales and marketing preferences of refiners, and the need to deplete CY 1988 stocks.

Commodities should be imported in one shipment and stored until sale at auction. The GDRM will be expected to absorb additional storage expenses without adding them to the auction price.

2. Self-Help Measures: The Vegetable Oil Sector Study executed by SEDES and financed by UNDP has been finished, and a number of important actions have been taken by the GDRM under the terms of various World Bank sector operations. These include removal of ex-factory price controls, partial liberalization of

internal marketing, and sale of a share of FY 87 Title I vegoil imports to the private sector through an auction process which allocated 50% of the year's concessional crude oil imports. MPARA has announced a number of its future vegoil program elements to the IBRD including:

-limitation of the GDRM role in the sub-sector to seed multiplication, extension, negotiation of vegoil imports and investments from external sources, and quality control.

-progressive reduction of vegoil imports

-short term development of annual crops and long term development of perennial oilseeds (especially for industrial oils).

The GDRM is committed to two principal self-help measures which will be undertaken whether or not the Section 206 program is approved:

(a) Completion of a National Vegetable Oil Master Plan is a condition for release of the next $30 million tranche of the IBRD Agricultural Sector Adjustment Credit. The GDRM has produced a first draft of this plan, but priorities still need to be assigned to types of oilseeds based on economic, technical, and financial considerations. Furthermore, a survey of demand in comparison with production, estimation of the gap to be filled by imports, and assessment of the export potential of peanuts are still needed. The GDRM also needs to review decisions that it has already taken, or proposes to take, in consultation with IBRD advisors principally: incentives offered to producers and refineries (e.g. through the investment code), priorities for public investments in services for producers and inputs unlikely to be obtained from the private sector (e.g. core plant material for improved perennial oilseeds), the import regime for primary raw materials and finished products, tariffs, and related taxes.

(b) Completion of a National Agricultural Research Plan by FOFIFA with assistance from ISNAR is expected by April 1988, for review by the IBRD and other donors in July 1988. The plan will include an oilseeds research component, with a likely focus on groundnuts; research identified in this plan may qualify for support with local currency generations under future food aid programs.

Under the Section 206 program, three additional self-help measures would support the broader context defined by these first two activities:

(c) Continued Reform of the Vegetable Oil Auction System to ensure better integration of grant-funded imports into the commercial system. By carefully timing and limiting import levels to avoid market saturation, the GDRM will work to establish prices which do not discourage local production. It is proposed that 100% of grant import commodities be allocated by a market mechanism which allows both public enterprises and the private sector to compete on an equal footing, monitored by audits. Improved auction procedures will be negotiated by USAID for incorporation in a Memorandum of Understanding.

(d) A MRSTD Survey of Artisanal Groundnut Oil Production will be financed by year one local currencies. This study will fill the gap in knowledge of the level of production, pricing, quality, and geographical importance of this portion of domestic production. Artisanal supply appears to be extremely important in isolated rural areas, likely serving consumers with the lowest purchasing power, while offering higher farmgate prices than refineries can offer, as processing costs are low.

(e) Divestiture of Vegetable Oil Parastatals will continue to be explored. Studies by Coopers & Lybrand funded by A.I.D.'s Madagascar Agricultural Rehabilitation Support Project (MARS) provide the basis for this self-help measure. During Phase I of these studies, SOAVOANIO, the coconut oil parastatal, was identified as a candidate for at least partial divestiture. Currently, the GDRM hopes to attract majority private sector ownership to finance a new refinery, and minority private sector participation in the coconut plantations. As requested by the GDRM, Phase II and III MARS studies will continue to assist the GDRM to develop an action plan for the whole or partial divestiture of SOAVOANIO. A groundnut oil extraction plant formerly operated by the groundnut parastatal, SNHU, was closed four years ago. This plant is a candidate for sale to the private sector if groundnut production in Tulear could be increased to ensure profitability, and if the GDRM is willing to assume responsibility for past debts. FAC and FED are willing to provide technical assistance to study the feasibility of reopening the SNHU plant under private ownership, and CCCE is willing to finance a viable private sector offer.

3. Local Currency Uses

It is proposed that FY 88 local currency generations support on-going mission programs in the agricultural sector, principally the FOFIFA/IRRI Rice Research project, rehabilitation of small farmers' irrigated perimeters, and the GDRM Environmental Action Plan.

(a) The basic food crop in Madagascar is rice; research in rice clearly supports GDRM efforts to reduce food aid dependency.

(b) Support to basic research in the food sector is also intended to benefit the neediest population groups since 80 per cent of the population are subsistence farmers and practically all produce some rice, root crops, or groundnuts.

(c) Further, the program ties directly to the approved Country Strategy (see CDSS 1986) which states: "Our long-term goal is to help Madagascar achieve and maintain food self-reliance particularly in the rice sub-sector."

With the advice and support of IRRI, a specific program has been laid out by FOFIFA to improve basic rice technologies available to farmers. Part of this plan is the construction and rehabilitation of the country's rice research facilities. In local currency equivalents, approximately $2 million would support rice research, with an additional $500,000 for implementation of the GDRM Environmental Action Plan. As stated in the CDSS, the Mission also plans to continue "to improve infrastructure upon which the small farmer depends", up to approximately $700,000 in FMG equivalent.

Programming of local currencies in future food aid programs would be based upon the outcome of the National Vegoil Master Plan and the National Agricultural Research Plan, as well as more specific projects being designed by other donors, which may require local currency funding. It is premature to speculate on specific outcomes, but there seems to be a consensus that groundnuts will be assigned a high priority in the short term, while perennial oil crops will be considered for longer term investments. Priority research on complementary rice cropping systems will certainly include groundnuts. As other donors do not appear to have adequate access to their own counterpart generations, A.I.D. may wish to provide counterpart support to other donors' technical assistance projects in the vegoil sector under future food aid programs. As examples, FAO indicates that local currency will probably be needed for the FAO/UNDP groundnut project, particularly in support of seed production, and FOFIFA has expressed interest in support for groundnut research.

<u>Illustrative Local Currency Budget (U.S. $ Equivalents in FMG)</u>

IRRI/FOFIFA Rice Research	$2.0 million
GDRM Environmental Action Plan	$0.5 million
Small Farmer Irrigated Perimeters	$0.7 million
Total	$3.2 million

V. Implementation Plan

Under previous Title I programs which provided vegoil (FY 83, 84, and 86), all vegoil was allocated by the Ministry of Commerce; the FY 87 program was a first experimental step in the direction of full competition, and served to expose the inequities between public and private dealers. The 1987 auction process was used to distribute P.L. 480 commodities with certain beneficial results:

- the process established precedents for inter-ministerial collaboration between Commerce, Industry and the Director General of Plan;

- private sector presence in the market was increased;

- the distribution and selling effort led to market extension in terms of both geographic range and slightly lower prices for consumers than would otherwise have been the case without auction support for private sector competition; and

- the bidding process obliged refiners to review cost, pricing, and marketing structures more carefully.

On balance the auction mechanism clearly had more positive effects in the areas of product marketing and distribution than pricing. Auction processes under the FY 87 Title I Program favored parastatals and disadvantaged the private sector refineries. For example, parastatals paid SOMAPALM late for insurance and warehousing without penalty, but the private sector was charged according to time elapsed. Also, because of their special relationships with the banks, parastatal refineries could delay refining and marketing their share of production until market conditions improved without additional cost of holding inventory in storage. Allocation and distribution of the FY88 programmed commodity will again take place by means of the auction. In light of past auction experience, and in order to make the entire process as fair as possible, specific procedural details will be negotiated and formalized in a Memorandum of Understanding once the program is approved.

The Mission will negotiate the following parameters for an improved auction process under the Section 206 program:

a) <u>Participants</u>

- The volume of commodities available to the private sector will be maximized. In FY 88, 100% of the total commodity grant will be made available to refiners through the auction

- Participants may bid freely, up to amounts which cumulatively will not exceed maximum refinery capacity, as determined by Auction Commission review.

- In accord with World Bank reform efforts in the public enterprise sector, and following a firm agreement between the World Bank and the GDRM on the closure of MAMISOA, the latter will not be allowed access to the auction process, nor will it receive P.L. 480 vegetable oil from public sector allocation reserves.

- Participation will be limited to operational refineries.

b) Procedures

- The role of the Auction Commission will be more clearly defined than in the past, and its responsibility for monitoring and evaluation strengthened. The Auction Commission will insure that rules and controls are drawn up and communicated to all eligible participants.

- The minimum auction price will continue to be the local currency equivalent of US FAS or world market import parity price, whichever is higher, with conversion calculated at the highest official rate of exchange in effect at the time of auction.

- The import handling agent will be selected by the Auction Commission on the basis of a competitive bid process; bids will include a schedule of surcharges for Auction Commission review and approval. These charges, to be levied above the agreed-upon minimum auction price, will be made known prior to the auction. Surcharges will cover the cost of insurance, customs, port taxes, administrative overhead, etc., and will be borne equally by all participants.

- Provision shall be made for an independent audit of the auction process. Performance and compliance with auction procedures, as established, will be a benchmark in evaluation of the overall year one program. Local currency generations may be used to offset audit expenses.

Implementation Schedule

Timing of the auctions is critical if participation is to be equitable and the marketing and sales of the vegetable oil is to take place in an orderly fashion. With this in mind the following schedule is proposed:

April, 1988	Submission of Project Paper to USAID/W
June, 1988	Program Approved
June, 1988	Memorandum of Understanding and Transfer Authorization signed
September, 1988	Complete Order of Commodities
September, 1988	Shipment Leaves U.S.
January, 1988	1st Auction
April, 1989	2nd Auction
July, 1989	3rd Auction

VI. Financial Management

Management of counterpart funds is the responsibility of the Director of the Treasury and the Central Bank of Madagascar. As with past programs, a separate special account, established in the Central Bank for each program agreement, will receive deposits from successful bidders prior to collection of commodities. The Central

Bank provides the Treasury with a weekly summary of account activity. Interest will not be generated, as this would involve the GDRM paying itself interest; the Mission Director's determination that interest need not be paid is attached in Annex D.

One of two local currency disbursement cycles are in effect, depending upon type of recipient. For projects managed by non-governmental organizations (PVO's, etc.), funds may be transferred quarterly into a special project bank account on a revolving-fund basis, though special approval for use of this mechanism is required in each instance. Government-managed projects operate on a reimbursement cycle based upon a vouchering system with transactions initiated by the implementing ministry.

The Director General of Plan is responsible for submitting an annual budget to the Minister of Finance for government-managed projects. As in the past, Mission approval for the overall allocation is required prior to submission. Every effort will be made to complete the budget process within the 1989 calendar year and effect disbursement in a timely manner.

VII. Bellmon Analysis

A. Storage Facilities

An assessment of in-country storage facilities as well as procedures for handling and distributing crude vegetable oil concluded that current capabilities are adequate for the successful implementation of the food aid program as envisioned..

1. The Port

(a) Responsibilities:

- The Port of Tamatave operates under the auspices of the Ministry of Transportation. Transshipping is possible.

(b) Storage & Handling:

- Two 500 MT storage tanks owned by SOMAPALM are located on the port premises; though intended for vegoil, they have never been used for this commodity. This capacity falls short of the volume required to make bulk shipments economically viable.

- As crude vegetable oil in drums is stockpiled in the open air, storage space is not a problem. Off-loading capacity for 55-gallon drums averages 600 - 700 MT per day. Sufficient labor is available. FY 87 Title I vegetable oil was removed from the port area within 15 days of arrival.

- o Port congestion is greatest between June and November (the coffee export season). From December through March, traffic is fair to heavy. The quietest period is between April and June. Tamatave port reserves berths for priority cargos which in the past included vegetable oil.

- o Application of new security procedures during late 1987 and the stationing of military guards have greatly reduced incidences of theft.

2. The Distributor

(a) Responsibilities:

- o SOMAPALM, the government-appointed handling agent for the 1987 Title I vegetable oil program, arranged for the transfer of the commodity from the port to its facilities in Tamata e. Private sector importers do enjoy equal access to the port to carry out commercial transactions.

(b) Storage & Handling:

- o SOMAPALM can store up to 6,000 MT of vegetable oil in drums out-of-doors on its grounds. Crude oil is preferred as it is more stable and has a longer "shelf life" under these conditions.

- o Security measures are adequate; the grounds are completely enclosed.

- o Commodity transport between the port and Somapalm grounds appears to be dependent upon the operation of one 30MT truck.

B. The Disincentive Issue

During the one-year life of the FY 88 program, importation of crude soybean oil under the Title II Section 206 Program at the 5,000 MT level will not act as a disincentive to local production of oilseeds. If no P.L. 480 vegoil were imported, it is estimated that the resulting increase in local production would be negligible.

On the cultivation side, production in four of the five categories of raw material available in country (see Annex C: "Oilseeds in Madagascar") is severely limited by factors other than classical economic supply/demand considerations. The majority of vegoil on world markets is produced as a by-product resulting from the processing of a particular crop. In Madagascar, cotton seed oil is one of several by-products resulting from the production of cotton fiber for the textile industry. Production of cotton seed oil is fixed in the short term by ginning capacity and demand for fiber. Palm oil production is limited by the size of existing plantations, with output further decreased as a result of cyclone damage during

1985-86. The potential for coconut cultivation is also limited by ecological and temperature conditions in the country, and the coconut belt is also at risk from cyclone damage. Increase in the production of soybean, a crop introduced relatively recently in Madagascar, is severely restrained by the need for a high level of imported inputs, ever more costly in hard currency.

Therefore the only possible crop both locally produced and price responsive is groundnuts (see Section IV. C. 1. "Sectoral/Technical Analysis"). In Madagascar, groundnut oil is a complimentary product to the production of export quality peanuts and table nuts for domestic consumption. Only the lower quality portion of nuts unable to be sold in the more lucrative table nut markets is transformed into groundnut oil, as groundnut farmers are not attracted by a farm-gate price of FMG 200-250/kilo, the price at which vegoil processors reportedly break even. To produce one kilo of groundnut oil, a processor must buy 5 kilos of groundnuts. If processors are to cover their costs, and make a reasonable profit, they can not afford to pay more than about 1000 FMG/kilo for raw material alone, as wholesale demand for vegoil seems to drop sharply above a price of FMG 1600-1700/kilo of vegoil (the price at which FY 87 Title I refined vegoil sells at wholesale). It is the present low level of consumer purchasing power, more than supply, which appears to set the maximum retail price of FMG 2,000-2,300/kilo and give rise to conditions of demand inelasticity.

For these reasons, local production can not compete with imports under present market conditions, with present production costs, and crop alternatives available to producers. The Section 206 program provides consumers with vegoil at world import parity prices, thereby discouraging investments in inefficient domestic production, by setting a ceiling on refined oil prices. Without this ceiling, the already low levels of consumption in Madagascar, as defined by nutritional standards, might be reduced even more. The one-year life of the Section 206 program has been explicitly chosen to provide transitional balance of payments assistance over the criticial planning period during the coming year. During this transition, multi-donor resources will help the GDRM to assess whether Madagascar has a comparative advantage in expanding production of one or more oilseeds over the longer term.

VIII. UMR ANALYSIS:

According to the Ministry of Commerce, Madagascar's commercial vegetable oil import data is as follows:

Year	Total Imports	Crude Imports	Refined Imports
1982	10,416 MT	437 MT	9,979 MT
1983	13,282 MT	279 MT	13,003 MT
1984	3,207 MT	384 MT	2,823 MT
1985	7,864 MT	669 MT	7,195 MT
1986	0	0	0
1987	2,000 MT	2,000 MT	0

The GDRM has a severe foreign exchange shortage (see the Economic Analysis in Section IV. C. 2. of this program document). The five year average for commerically imported crude oil is less than 700 metric tons. In view of Madagascar's extraordinary balance of payments difficulties, evidenced by complete inability to commercially import crude oil in 1986, the Mission strongly believes that the UMR should be waived. (It should be noted that the Mission did not accept the UMR as calculated in FY 87 for this reason.)

IX. Monitoring and Evaluation Plan

A. Monitoring Plan:

Implementation of a liberalized auction process and other self-help measures will be monitored by the GDRM and USAID on three levels. First, the Auction Commission established for the FY 87 Title I Program will continue to serve as the forum for monitoring activities, as it includes representives from the Ministries of Commerce, Industry, and Finance; DGP; and USAID. The Commission will be responsible for decisions on commodity movement, enforcement of auction rules, and supervision of financial management. The Commission will set minimum prices for auction commodities and will review rates of sales. Second, DGP will prepare an annual report on progress on self-help measures and local currency usage. Third, the new PSC economist will take the lead in USAID monitoring activities, with emphasis on policy reform performance, and follow-up with other donors, with assistance from local consultants.

A baseline study on the impact of the FY 87 Title I auctions of imported soybean oil will be completed in April 1988 by Dinika, a Malagasy consulting firm under contract to the Ministry of Commerce. Local currencies will be programmed to support semi-annual updates of this baseline study, to analyze trends in pricing, demand, rates of sales, and expansion or contraction in the sub-sector. The local consultant will work with the Ministry of Commerce to monitor and report on the following specific data points:

- edible oil prices nation wide (ex-factory, wholesale, retail)
- rates of sales in markets by region
- transport and handling costs affecting market prices
- tax policies and enforcement
- domestic production levels including trends in artisanal oil production
- import parity prices and non-P.L. 480 vegoil imports
- profit margins for domestic oilseed producers, factories, wholesalers, retailers
- impacts of market pricing on demand and rates of sales by season
- credits given to oilseed producers and factories.

Implementation of auction procedures will be monitored by a local audit firm under contract to DGP, with semi-annual reports on:

- -timeliness and completeness of deposits into the Special Account for auction proceeds
- -costs and fees charged to all bidders by the importer (freight, insurance, customs duties, unloading, warehousing, and agent's commission) and timeliness of payments.
- -expenditures from the Special Account for activities approved by A.I.D. and the GDRM.

Minutes will be kept of Auction Commission meetings as a basis for annual evaluations and programming exercises. Bank statements on the Special Account will also be available for review as needed.

B. Evaluation Plan:

A December 1988 evaluation will be undertaken with input from REDSO (PDO, FFPO, Regional Agronomist, and Economist), and possibly specialized vegoil consultants supported by PDS funds, to assess progress on self-help measures and policy reforms within the vegoil and related agricultural sub-sectors. The evaluation is expected to include review of the National Vegoil Master Plan and the FOFIFA National Agricultural Research Plan, as input to the design of FY 89 and beyond food aid programs. It is still not clear whether, in fact, vegoil self-sufficiency is an economically efficient use of Madagascar's agricultural and industrial resources. The evaluation will reassess national vegoil strategy and goals after the products of self-help measures come on line to assist with decisions on investments in this sub-sector.

Annex A- Bibliography of Documentation Consulted

General Economic Situation

- Consultative Group for Madagascar, Economic Progress Report (January 1988)
- Madagascar Policy Framework Paper (IBRD, July 1987)
- Industry and Trade Policy Adjustment Program (IBRD, June 1987)
- Agricultural Sector Adjustment Operation (IBRD, April 1986)
- Madagascar - Staff Report for Third Review Under Stand-by Arrangement (IMF, December 1987)
- Report on the Economic Reform Program in Madagascar (Eliot Berg, October 1987)
- Madagascar - Structural Adjustment Arrangement (IMF, September 1987)
- Aide-Memoire de la mission conjointe pour la preparation de l'Operation d'Ajustement Structurel (IBRD, November 1987)
- Madagascar Economic Policy Reform Program PAIP (AID, December 1987)

A.I.D. Strategy in Madagascar

- Madagascar CDSS FY 1988
- Madagascar ABS FY 1989
- A Concept Paper on AID Strategy in Madagascar for 1987-1990 (J. Kelly et al, December 1987)

Rice Reform

- Food for Progress Agreement
- Steve Browne reports on rice, Oct-Dec 1987
- CASA I Supervision (IBRD, 2/88)
- Market Liberalization - A Note on Proccops (IBRD, 2/88)
- Cable - "Bumpy Road to Rice Reform"
- Sam Rea Memo to Freeman on 3/8/88

Agricultural Sector - Misc.

- Administrative Constraints to Agricultural Exports (IBRD, 1987)

Food Aid/Program Guidance

Food Aid Program Description

Guidance for Implementation of Section 206 Government to Government Development Programs

Revised Title III Guidance

Food for Progress Program

Supplemental Guidance on Programming Local Currency

Africa Bureau Supplementary Message on Local Currency Programming

Vegetable Oil in Madagascar

Plan Directeur Oleagineux - Rapport Final (SEDES, 1987)
Composition of PL480 Title I Commodities 1987-1991 (Peter Robinson, February 1987)
Evaluation du Programme d'Importation d'Huile Brute de Soja PL480 (Terms of Reference and Dinika proposal, January 1988)
PL480 Title I Agreement, FY 1987
Vegetable Oil Auction (Mission files)
Vegoil stock and follow-up information (Mission files)
Quality control of P.L. 480 VegOil (Mission files)

Annex B: Oilseeds in Madagascar

Groundnuts were historically the most widespread small holder oil crop and would "technically" be relatively easy to re-establish. A system for supplying a reliable source of seed would be required and farm prices would have to be adequate to encourage production. Soils are suitable in many parts of the country and there are no major disease risks. Groundnut processing (both extraction and refining) is relatively simple, requiring minimal capital investment compared to either oil palm or soybean. The oil content in groundnuts is relatively high and preferred by a majority of consumers; additionally the nuts are popular as a directly consumable product. On the negative side, oil production per hectare is low and therefore high-priced over the long term when compared to perennial oil crops such as coconut or oil palm. In addition, soil erosion is a risk, as with any crop that needs light sandy soils. Erosion risk would be lowered if groundnuts were inter-cropped as part of a more diversified farming systems approach, rather than mono-cropped as in Senegal. In the past, oil production was a by-product of the export and direct consumption markets for groundnuts. Careful economic analysis will be needed to assess whether the export market can be regained, and thus define the long term role groundnuts can play in the vegoil sector.

Cotton seed is the second most important traditional source of vegetable oil in the country. It is a by-product of the fiber industry and produces its own by-product, cotton seed cake, for use in livestock feed. Expansion of cottonseed oil is tied to fiber production and would level off once local fiber production requirements are met. The industry is highly competitive; to be economically viable all parts of the production and processing activity must be well coordinated. HASYMA, the cotton monopsony, has had a mixed performance record in the past, but with proper management to ensure prompt payment to producers, this parastatal could supply adequate institutional support to the sub-sector. In view of U.S. Government restrictions on support to the cotton industry, P.L. 480 local currencies could not be used to foster cotton production.

In early 1986 the GDRM opened MAMISOA, a large (12,500 tons/annum of oil) parastatal soybean processing plant in Antsirabe. To-date local soya production has virtually never materialized (e.g. 1986-87 production was only 140 tons), and soybean faces major constraints in the future which could not be easily overcome. Again, U.S. law prohibits use of A.I.D. local currencies to develop this industry.

Over the longer term, the two perennial oil crops (palm and coconut/copra) offer some very interesting options. Under proper management, both crops are capable of producing high yields of oil, up to 2 tons per hectare. On the negative side, both require high levels of initial investment and long term commitments at the production level. Oil palm also requires quite specialized extraction equipment and, as a plantation crop, is not well suited to small scale production. Both crops require high levels of fertilizer and hot humid climatic conditions. Of the two, copra is by far the best suited to small scale production and outgrower satellite production models have been successful in other parts of the tropics. In contrast to palm oil fruit, copra has relative good storage life as a raw product and ships well. As new projects are developed on the basis of the National Vegetable Oil Master Plan, funding might well be used in support of small scale production projects in copra.

The constraints to increased production initially identified above vary from crop to crop. Obviously, input availability is a requirement with a wide range of problems which must be resolved. In groundnuts, field trials and research work have identified large numbers of varieties which are suitable for various parts of the country. Importation and multiplication of seed material will be an initial constraint but traditional systems existed in the past which could be re-established with GDRM approval. A crop which has traditionally been grown in country requires less extension than a new crop. Re-establishment of the groundnut sector requires an adequate and sustainable price and a reliable market for farmers' production.

Basic exploratory field trials on sunflower are underway, but it is too soon to assess long term prospects for this oilseed in Madagascar. Sunflower has a higher oil content than other oilseeds (40%), is traditionally a small holder crop, and has been successfully grown in other parts of the semi-arid tropics.

Annex C:
Food Needs Assessment

Commodity (in Metric Tons): Refined Vegetable Oil
Date of Analysis: March, 1988

Period of Analysis	Jan.-Dec., 1988	Jan.-Dec., 1989
Population	10,902,550	11,229,627
Per Capital Requirement (Kg/Yr)	1.0	1.0
Total Vegoil Requirement (MT)	10,903	11,330
Total Domestic Production	3,500	3,500
Beginning Stocks	5,147	1.344
Exports	0	0
Total Domestic Supply	8,647	4,844
Import Requirement	2,256	6,486
Imports	0	0
Food (Deficit) or Surplus	(2,256)	(6,486)
USG PL-480 Vegoil	3,600	5,000
Other Donor Vegoil	0	0
Target Reserves	0	0
Uncovered (Deficit) or Surplus	1,344	(1,486)

Comments:

- All references are made to refined vegetable oil, applying a conversio rate of 90%.
- Population is based upon World Bank estimates, with a 3% per annum growth rate factored in.
- Per capita vegetable oil requirement is set at 1.0 kilo/year, based up historical trends, including estimated consumption of artisanal production. No allowance is made for lipides consumed in other forms (animal fat, edible nuts, etc.).

- The calculation of CY1988 beginning stocks was based upon the following assumptions: of the 7,341 MT refined Title I vegoil received in-count prior to 12/31/87, the entire portion auctioned to the private sector (1,094 MT) was sold. This, in addition to estimated public sector sales of 1,100 MT left a carryover stock of 5,147.

- USG PL480 vegoil in CY1988 represents the refined balance of FY87 Title I, received in CY88.

- The proposed FY88 commitment, shown in CY89 is based upon a proposed USD 3.275 million program. The calculations include freight costs of USD 143/MT. If additional CY 89 imports are needed to cover the deficit calculated, this will be noted in the December 1988 evaluation, and needs will be addressed in FY 89 food aid program design.

Annex D: A.I.D. Representative's Determination that Interest will not be Required on Local Currency Deposits

ACTION MEMORANDUM FOR THE REPRESENTATIVE, USAID/ANTANANARIVO

Subject: Madagascar- Section 206 Program- Determination that Interest Need Not be Paid on Local Currency Deposits

Action Requested: Your determination that interest will not be required on local currency deposits placed in a Special Account at the Central Bank of Madagascar.

Discussion: According to current AID/W guidance (87 State 327494, para 2.80), local currencies are to be deposited in an interest-bearing account unless this requirement is waived by the highest A.I.D. officer at post. Under the Title II, Section 206 Program, as in past Title I Programs, local currencies generated by the sale of USG imported commodities will be deposited in a Special Account at the Central Bank of Madagascar. These funds will be jointly programmed by A.I.D. and the GDRM for mutually agreed upon activities in the GDRM budget. Local currencies to be generated by the FY 88 Section 206 Program will specifically support GDRM rice research through FOFIFA in collaboration with IRRI, implementation of the GDRM Environmental Action Plan, and GDRM rehabilitiation of small farmers' irrigated perimeters. All proposed uses of these funds are public sector budget expenditures.

Central Bank accounts do not pay interest. In any event, interest payments would be meaningless in this case, as the GDRM would merely be paying itself interest on public sector funds which are an integral part of the public sector budget.

Authority: According to the current AID/W guidance cable on local currency programming (87 State 327494, para 2.80), "a determination not to follow A.I.D.'s preference for interest-bearing accounts may be made by the highest A.I.D. official at post."

Recommendation: By your signature below it is recommended that you determine that local currencies generated by the sale of Title II Section 206 vegetable oil imports be deposited in a Special Account at the Central Bank of Madagascar, without interest payment requirements.

APPROVED________________

DISAPPROVED________________

DATE________________

Annex E - Map of Madagascar