# USAID/CAIRO PL 480 TITLE II

## PROGRAM REVIEW

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# EXECUTIVE SUMMARY

## Egypt PL 480 Title II Review

The Egypt PL 480 Title II program provides food for five separate projects:

| Activity | Number of Beneficiaries | FY 1981 Title II Funds |
|---|---|---|
| School Feeding (CRS*) | 1,200,000 | $ 6.4 m |
| Mother Child Health (CRS) | 1,000,000 | $13.5 m |
| Other Child Feeding** (CRS) | 45,000 | $ 1.3 m |
| Family Planning (CARE) | 120,000 | $ 1.3 m |
| Sinai Feeding*** (CARE) | 35,000 | $ 1.4 m |

The CRS sponsored School Feeding Project, which is operated by the Ministry of Education (MOE), efficiently provides school lunches for 1.2 million children in over 3,000 rural primary schools in Lower Egypt. The meals represent roughly 625 calories and 24 grams protein and include bread and either cheese or halwa or dates. Title II wheat soy blend (WSB) and flour are used to make the bread; the MOE provides some of the flour for the bread and the cheese, halwa and dates. Almost everyone associated with the project (parents, children, teachers, MOE officials, and CRS) believes that the project is successfully achieving its objectives of increased enrollment, reduced drop-out rates, reduced absenteeism and increased attentiveness in class. However, MOE

*Catholic Relief Service

**Only partially reviewed because rather small and includes a wide variety of institutions (orphanages, kindergartens, day care centers hospitals) operated by several different organizations.

***Not reviewed because not subject to cuts in FY 82 due to political sensitivity

efforts to substantiate this view by collecting evaluation data have not been successful to date due to measurement problems and the difficulty of finding an appropriate control group. Major issues surrounding the project include:

(1) The continued use of WSB which is rather expensive and adversely affects the bread taste.

(2) Proposed commodity shifts for FY 82 such as dropping WSB, perhaps adding milk, and substituting bulk wheat for flour. Commodity shifts are being proposed as a means of meeting budget cuts.

(3) The continued feeding of school children in the canal cities under this "rural" school feeding project.

The largest of the five feeding programs is the Maternal Child Feeding Project, sponsored by CRS and operated in 2400 clinics nationwide under the direction of the Ministry of Health (MOH). The project provides "take home" food supplements to 500,000 children aged 6-36 months and their mothers. A total of 17,040 metric tons (MT) of Instant Corn Soy Milk (ICSM) and 5,240 MT of soy oil are being provided in FY 81. The program aims to improve the health/nutrition status of participant children through improving their consumption, whether directly with the food supplement or indirectly through nutrition education and other MCH services. The PL 480 commodities represent an incentive for mothers to use MOH clinics and have potential importance as a catalyst to improve delivery of general MCH services. Major issues concerning the current effectiveness of program operations include:

(1) Measurement of program impact given the continued lack of a nationally agreed upon growth chart and difficulties in instituting growth monitoring of children in clinics.

(2) Appropriateness of an intervention oriented toward increased consumption given the tremendous importance of diarrheal and infectious diseases.

(3) Design deficiencies in the current nutrition education component, especially the ineffective linkage to the MCH food distribution.

(4) Selection of an optimal commodity mix given current cost-cutting requirements.

The Other Child Feeding Project under CRS sponsorship is carried out in collaboration with the Ministry of Social Affairs (MSA) and private organizations. The project provides commodity support to 940 public and private sector institutions serving 45,000 children under age 14. The objective of the project is to provide nutritious meals for needy children in institutions such as orphanages, hospitals and day care centers. Because of its small size, the project was not reviewed in depth for this report. However, certain issues were raised for possible future consideration, including:

(1) whether food can or should be supplemented with other more appropriate inputs and

(2) questions about effectiveness of project operations in terms of reaching needy children, especially program size, commodity choice, and logistics.

The CARE sponsored Family Planning Project is financially supported by the MSA and operated by the Egyptian Family Planning

Association (EFPA), a private voluntary organization (PVO). The project seeks to use PL 480 food as an incentive to increase the acceptance and effective practice of family planning. The EFPA project centers provide 40,000 family planning acceptors (each assumed to have two young children) with a ration of soy oil and soy fortified flour. The centers are housed in facilities donated by local PVO's, are open for two hours in the afternoon three days a week, and are staffed by part-time doctors and nurses (seconded for the MOH) and social workers (seconded from MSA). A comprehensive survey by the EFPA revealed that women in the project are relatively old (average age 35 years) and are successfully using contraceptives (only 11% of those in the project 2 to 3 years gave birth). However the study also revealed that 1/2 to 2/3 of women were using contraception before the project started thus suggesting that most project women would be practicing family planning without the food incentive. Major issues include:

(1) Targeting, how to limit the project to new and younger acceptors.

(2) Capacity of local centers to operate the project.

(3) Whether or not to extend the project beyond the current agreement which expires in January 1982.

An external evaluation of the Egypt Title II Program has been scheduled for the fall of 1982. The authors of the review reported herein do not recommend going ahead with the scheduled evaluation because it is not well timed and other types of external assistance probably would make a substantially greater contribution to improving the program.

# CONTENTS

## FOREWARD AND ACKNOWLEDGEMENT

This program review and justification, which covers four of the five PL 480 Title II projects in Egypt, was completed in three short and hectic weeks in late May and early June 1981. The review included an analysis of a large number of relevant documents; numerous meetings and work sessions with CRS and CARE staffs; meetings with five national government agencies, one national voluntary agency and five governorate level agencies; and site visits to four MCH centers, five family planning centers and one other child feeding center.

The review and program justification could not have been completed without the cooperation and valuable assistance provided by Ernest Peterson and Amal Nassar, USAID Food for Peace Staff; Andrew Koval, George Ropes, Thomas Taurus, and Samir Ishaq of CRS and Ashraf Rizk of CARE. A special tribute of gratitude is offered to Mervat Fouad who spent evenings and weekends converting our scribbled drafts into typed copy. A full list of the people contacted in preparing this report is provided at the end of this section.

The views and ideas expressed herein are solely those of the authors and should not be taken as the official or unofficial views of the Agency for International Development.

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Dr. A. Kielmann, AID Rural Health Project Director
Mr. Clayton Ajello, AID Rural Health Project Director
Mr. Harold Alderman, AID Impact of Food Subsidy Project

Site Visits

Doctors, nurses, social workers, other employees, and women beneficiaries at centers visited:

MCH Centers:

Assiut MCH Center
Giza MCH Center
Madinet El Ommal MCH Center

Rural Health Unit:

Tant El Gezira

EFPA Family Planning Centers:

Minya EFPA Center
Abou Corqas EFPA Center, Minya Governorate
Sebbarbay EFPA Center, Garbeya Governorate
Tanta EFPA Center, Garbeya Governorate
Kafer El Zayette EFPA Center, Garbeya Governorate

Other Child Feeding:

Kafer El Zayette Kindergarten, Garbeya Governorate

## LIST OF ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| CARE | Cooperative for American Relief Everywhere |
| CDC | U.S. Center for Disease Control (Atlanta) |
| CRS | Catholic Relief Service |
| EFPA | Egyptian Family Planning Association |
| FAO/WHO | Food and Agricultural Organization/World Health Organization |
| g | Gram |
| GOE | Government of Egypt |
| ICSM | Instant Corn Soy Milk |
| IMC | Inter-Ministerial Committee for Foreign Voluntary Assistance |
| K, or k, or Kg | Kilogram |
| LE | Egyptian Pound (equal to about U.S. $1.43) |
| MCH | Mother-Child Health |
| MIT | Massachusetts Institute of Technology |
| MOE | Ministry of Education |
| MOH | Ministry of Health |
| MSA | Ministry of Social Affairs |
| MT | Metric Tons |
| NFDM | Non Fat Dry Milk |
| OCF | Other Child Feeding |
| PVO | Private Voluntary Organization |
| pt. | Piaster (LE 0.01, about $0.014) |
| WFP | World Food Program |
| WSB | Wheat-Soy Blend |

# CHAPTER ONE: INTRODUCTION

PL 480 Title II activities in Egypt resumed in 1974 and have operated continuously since then. The current Title II program operates through two PVO's and includes five major activities. Catholic Relief Services (CRS) operates three Title II activities: (1) rural primary school feedings; (2) supplementary feeding and nutrition education at mother-child health (MCH) centers and (3) other child feeding. CARE operates two Title II activities: (1) mother and child feeding through family planning centers and (2) bedouin (and non-bedouin) feeding in the Sinai area. This review and justification focuses on only four activities; the Sinai feeding project is not reviewed in this report due to time constraints and the greater need to improve understanding of the other four activities which are more vunerable to budget cuts. Before presenting the review and justification for each activity, it is useful to briefly describe the CRS and CARE organizations in Egypt and the food subsidy program.

## A. CRS - Egypt Overview

CRS signed a formal agreement with the GOE in 1957 and has operated continuously since then. CRS operates several PL-480 Title II projects including rural primary school feeding, supplementary feeding, nutritious education in MCH centers, and other child feeding. In FY 81 these projects involved about $20 million dollars of food commodities and about $13 million in other project costs which are covered by the

Government of Egypt (GOE) (See Table I.1). In addition, CRS operates other projects amounting to about $10 million; these other projects are primarily agricultural and include such activities as fish culture, agricultural mechanization, poultry and bee keeping. CRS operates three offices in Egypt. The Cairo headquarters has a staff of 33: the branch offices in Alexandria and Assiut have staffs of 5 and 3, respectively.

B. CARE - Egypt Overview

The CARE program in Egypt started in 1954 with a national school lunch program which reached 3 million recipients per year before ending with the 1967 war. The CARE program re-opened in 1974. At present CARE has four main projects: (1) The Title II family planning project reviewed in this report, (2) a project which provides fishermen on Lake Nassar with suitable shelter, basic medical care, and simple agriculture, (3) a potable water project in the North Sinai Community of Bir El Abd, and (4) the Sinai Title II feeding project which is described below. The CARE - Egypt staff has 13 in Cairo (administration), 19 in Asswan (fisherman project) and 8 in Sinai (feeding project).

C. CARE: Title II Sinai Social Action Project

Though the CARE Sinai Social Action Project is an important component of the Egypt PL 480 Title II program, it is not included in this review because its more political nature mandates a different review process. As there are no immediate plans to alter the current level of this activity by either CARE or the USAID, the omission of this one component of the PL 480 Title

## Table I.1

FY 81 [illegible] OF GOE RELATIVE TO THE THREE P/L 480 TITLE II PROGRAMS OF CRS/EGYPT

| SOURCE | Governorate expenses | | Trans- b/ portation | Ministry's Administr. Cost | Contri- bution to CRS | I.H.C. c/ | GRAND TOTAL |
|---|---|---|---|---|---|---|---|
| | a. Local warehouses | b. Cost of S.I. Meals | | | | | |
| EGH | 282,000 | - | 389,498 | 405,000 | 120,000 | 287,896 | LE 1,483,394<br>$ 2,121,253 |
| ECS | 54,000 | 60,000 a/ | 315,000 | 569,106 | 130,000 | 217,280 | LE 7,285,376<br>$ 10,416,102 |
| ECSA | 12,000 | - | 25,735 | 24,265 | - | 38,567 | LE 150,507<br>$ 215,311 |
| SUB-TOTAL | 348,000 | 60,000 | 779,233 | 998,371 | 250,000 | 543,743 | LE 8,919,47<br>$ 12,754,666 |

a/ Baking bread : LE 1,800,000
Cheese + bales + Halawa : LE 4,200,000
Total : LE 6,000,000

b/ Includes both ECC transportation charges and Ministry transportation costs within governorates

c/ ECC storage and overhead, excludes ECC transportation charges

Source: CRS - Egypt

II program seems justifiable. However, since this review covers all other components of the Egypt Title II program, it seems appropriate to describe briefly the Sinai program in this report. The description which follows is almost entirely excerpted from the CARE-Egypt FY 82 program plan.

In accordance with the Camp David Agreement, the Sinai is in the process of being returned to Egypt. At present about 2/3 of the Sinai is under Egyptian sovereignty. It is reasonable to assume that the third and last segment of Israeli-held Sinai will be turned over to Egypt in April 1982 according to the Agreement.

The population of the Sinai can be divided into two distinct cultural groups: bedouin and non-bedouin. The bedouins are essentially nomads who follow the seasonal crops. Non-bedouins are mostly town dwellers located in the Mediterranean coastal town of El Arish. Virtually all food commodities are imported from Egypt proper. While food may be available, its consumption is below the daily minimum requirements for low income residents.

Although the Egyptian Government is beginning to establish the infrastructure required to deliver services necessary for economic and social development, it will be some time before these services are in place. For the interim period, food assistance will be required for that portion of the population whose economic means are marginal.

The overall objective of the project is to provide food assistance to that portion of the Sinai population that falls under the following categories:

(1) Adults over age 60 with children under the age of 16 or in school.

(2) Invalids unable to work.

(3) Unmarried women over the age of 45.

(4) Divorced or widowed women with children under the age of 16 or in school.

(5) Orphans under the age of 18.

(6) Nomadic bedouins with marginal means of support.

The beneficiaries in the above categories are selected through the records of the Ministry of Social Affairs. The FY 82 program will provide food for 7,000 non-bedouin beneficiaries in El Arish and 28,000 bedouin beneficiaries distributed throughout the Sinai. As a result of the Camp David Agreement, the program will acquire another 36,000 bedouin beneficiaries in April 1982, for a total of 64,000. The FY 82 commodity cost for the program is about $1.4 million.

The commodities are distributed in a dry form four times a year to bona fide ration card holders.

(1) Non-Bedouin (regular)

Families are issued ration cards indicating the number of family members. Each family member receives a 3 month ration as follows:

| | |
|---|---|
| A. All purpose flour | 10.5 kgs. |
| B. Soy-fortified bulgar wheat | 9.0 kgs. |
| C. Soybean salad oil | 1.5 kgs. |

(2) Commodity distributions for bedouin ration card holders are the same as those for non-bedouin except for the food rations which are:

| | |
|---|---|
| A. All purpose flour | 19.5 kgs. |
| B. Bulgar | 9.0 kgs. |
| C. Soybean salad oil | 1.5 kgs. |

Since flour, bulgar and oil are part of the basic commodity package in Egyptian homes, the commodities are acdeptable to the recipients.

The Inter-Ministerial Committee for Foreign Voluntary Assistance (IMC) is responsible for the clearance of all food commodities through customs and for the inland transportation of such commodities to the Ministry of Social Affairs (MSA) warehouses in the Sinai. Although the MSA warehouses in the Sinai are small and temporary they are more than adequate to meet the program needs; commodities are rarely stored for more than a month. CARE distributes the commodities directly using CARE employees, employees seconded from MSA, and contracts with trucking companies.

D. Food Subsidies in Egypt

Title II activities in Egypt should be viewed in the context of the sizeable GOE food subsidy program. Since at least the 1950's, the GOE has followed a substantial income transfer policy through direct and indirect subsidies.[1/] The food subsidy amounted to one billion Egyptian pounds in 1979 and the total net benefits of the subsidy go to urban residents. The most important items within the food subsidy are wheat and wheat flour (LE 590 million in 1979). Fats and oils are next in importance (LE 200 million) followed by sugar, meat, beans, tea and several other items.

Logically enough, the greatest subsidy is given the most important food item in the Egyptian diet. According to the Food Balance Sheets for 1976-78, cereals (primarily wheat) provided 70% of both total energy and protein value.[2/]

An analysis of subsidies in terms of urban household expenditures reveals that the value of food subsidies totals about 19% of total expenditures with the subsidy for wheat alone equal to 11%. As might be expected, the relative importance of the subsidy is inversely related to household income. For urban households with expenditures less than LE 775 in 1979 (27% of total population) the subsidy of food and wheat represents 28.5% and 17.5% respectively of their total expenditures. Roughly 60% of this group's expenditures are on food. Thus the subsidy (28.5%) amounts to almost half of their food expenditures (60%). In other words, ceteris paribus, if there were no food subsidy, these low income households would have to make almost 90% of their total expenditures on food to buy the same amount of food that they currently purchase. Though the food subsidy in terms of percentage of total expenditures for urban households is greatest for low income groups, the absolute value of the subsidy is slightly larger for upper income groups. The food subsidy is important to poor urban households; without it they would have a very difficult time meeting their food needs.

The distribution of PL-480 Title II commodities can be viewed as an additional food subsidy. However, the Title II food is targeted to low income groups much better than the general food subsidy and represents a much smaller income transfer to recipients.

## FOOTNOTES

1. USAID/Cairo, FY 81 CDSS Annex "Egypt's Food and Energy Subsidies," 1979.

2. Ministry of Agriculture, GOE, "Proposed Development of Nutrition, Basic Information," Cairo, Feb. 1980.

# CHAPTER TWO: MINISTRY OF EDUCATION-CRS PRIMARY SCHOOL FEEDING ACTIVITY

## I. BACKGROUND

### A. Egyptian Education System

#### 1. Structure:

Six years of primary education is compulsory and the normal entry age is six years. The curriculum focuses on Arabic language and mathmatics but a variety of other topics are taught including religion, science and health, and physical education. Examinations are held at the end of the second, fourth and sixth years. About 90% pass the sixth year exam and, of those, about 97% go on to three year preparatory schools which in turn lead into general secondary schools or a variety of specialized and or technical schools. Schools operate six days a week and the school year generally runs from early fall to late spring, with schools closed during the summer. School enrollments, dropouts and absenteeism are discussed below because these are important in identifying the target group of school feeding programs.

#### 2. Enrollments:

Enrollments in all Egyptian schools during the 1978-79 school year are presented in Table II.1. Table II.2 indicates growth in primary school enrollments from 1970/71 to 1980/81. Growth in public primary school enrollments for this period averaged about 2.0% per year compared to a population growth rate of 2.3%. However, the rate of increase for 1978/79 to 1980/81 averaged about 2.6% per year.

Table II.1

Egypt Primary School Enrollments 1978/79 1/

| | Male | Female | Total |
|---|---|---|---|
| Primary (6 years) | 2,589,615 (60%) | 1,697,509 (40%) | 4,287,124 (100%) |
| Preparatory | 979,626 (63%) | 567,602 (37%) | 1,547,308 (100%) |
| Secondary | 614,387 (70%) | 261,947 (30%) | 876,334 (100%) |

Though primary school is compulsory, only about 80-85% of six year olds enroll in first grade and about 75% of 6 to 12 year-olds attend school. School capacity is a major constraint to increased enrollments, many schools operate on double shifts. In the primary target area of the CRS/MOE school feeding program, rural areas of lower Egypt, about 75% are enrolled, 84% of boys and 56% of girls. (Rural areas of Lower Egypt have indictors of educational development about equal to those for all Egypt; urban areas are better off while areas in Upper Egypt are worse off). Children from low income groups are less apt to be enrolled in school than those from wealthier groups.

3. Dropouts:

The school dropout phenomena is recognized widely as a serious problem and assumed to be higher for low income and

Table II.2

PRIMARY SCHOOL ENROLLMENTS

| Year | Primary Enrollments | | Sixth Year Examination | |
|---|---|---|---|---|
| | Total | Public | Applied for Exam | Percent Passing Exam |
| 1970/71 | 3,738,200 | 3,538,377 | 513,338 | 60.6% |
| 1971/72 | 3,871,354 | 3,676,810 | 530,639 | 62.5% |
| 1972/73 | 3,987,898 | 3,789,407 | 586,124 | 63.5% |
| 1973/74 | 3,918,396 | 3,719,240 | 623,349 | 64.7% |
| 1974/75 | 4,074,893 | 3,868,952 | 676,358 | 64.3% |
| 1975/76 | 4,120,937 | 3,922,174 | 713,344 | 67.2% |
| 1976/77 | 4,151,957 | 3,939,702 | 672,195 | 70.9% |
| 1977/78 | 4,211,345 | 3,997,560 | 641,329 | 74.4% |
| 1978/79 | 4,287,124 | 4,075,565 | 584,510 | 76.0% |
| 1979/80 | 4,434,557 | 4,214,893 | 664,197 | 80.4% |
| 1980/81 | 4,548,188 | 4,317,146 | | |

female children and those from rural areas. Parents with low incomes often withdraw children from school as soon as their productive capacities are sufficient to earn outside income or to help effectively with household chores. The data suggest about 15-20% of children never enroll in school and an additional 12-20% dropout before completing primary school.[2/]

4. Absenteeism:

Recent information indicate that absenteeism is less than 10% in most areas of the country, and the national average is said to be about 5%[3/]. Additional data are needed to assess trends in rates of absenteeism.

B. School Feeding in Egypt:

Egypt has a long history of school feeding dating back over two thousand years. In more recent times, a 1951 law expanded school feeding to include 2 million school children. From 1954 to 1967 PL 480 assistance through CARE was provided to the school lunch program which reached over three million recipients by 1965. However, PL 480 commodities were cut off after

the 1967 war and the Government of Egypt (GOE) did not continue the program because priorities were reordered and budgets adjusted to reflect defense needs. After the 1973 war, the subsequent disengagement agreement, and the "Open Door" Policy, GOE priorities shifted back to development needs and placed renewed emphasis on school feeding. The GOE identified three problem areas for an action program;[4/]

1. Malnutrition in primary school age children and its effect on academic performance.

2. Drop-outs and absenteeism in primary schools.

3. Increasing illiteracy rate.[5/]

The GOE believed that a school lunch program could make a positive contribution to resolving these problems, particularly in rural schools where the problems are most acute. The GOE, through the Ministry of Education (MOE), appealed to World Food Program (WFP) and Catholic Relief Service (CRS) to assist in initiating a school feeding program for over two million rural primary pupils. The WFP signed an Agreement in July 1975 to provide food rations to about 1.2 million rural primary school children in Upper Egypt. WFP supplies for each pupil (six days a week, 180 days a year): 120 grams of wheat flour (baked into a 150 gram bread loaf) and 40 grams dried skim milk (exchanged for local half cream processed cheese).

The pupils receive the bread every day and a cheese portion (20 grams) three days a week. On the other three days they get GOE provided cooked beans or halawa or processed dates. Evaluation reports indicate that the program is operating fairly smoothly and that children and teachers are enthusiastic about it.

## II. CRS/MOE SCHOOL FEEDING PROGRAM:

### A. Overview:

CRS operates in Egypt under a basic agreement signed in 1974. In accordance with the basic agreement, CRS and the appropriate Ministries enter into separate agreements annually for each CRS activity in Egypt. The Inter-Ministerial Committee (IMC) is, inter alia, responsible for all programs that provide PL 480 Title II assistance.

The school feeding program agreement was signed on November 17, 1976 and food deliveries started shortly thereafter. Under the agreement, CRS agreed to provide (through PL 480 Title II) 100 grams flour and 50 grams wheat-soy blend (WSB) each school day for rural primary school pupils in the following governorates of Lower Egypt Giza, Kaliubia, Sharkia, Gharbia, Dakahliya and Damietta. In addition, the same ration of food also was to be provided for all primary school pupils in the war torn, canal zone, urban governorates of: Port Said, Ismailia and Suez. During the first year, 672,000 beneficiearies were reached and the following year all members of the target group were being reached (about 1.1 million - this figure has increased with growth of enrollments in primary schools - see Table III.3).

Under the agreement the GOE pays the costs for reception, storage, transportation and preparation of the PL 480 commodities as well as all other administrative, personnel, and supervisory costs. In addition, the GOE provides other foods so that a

Table III.3.

History of Food Distributions
Under MOE/CRS School Feeding Program

| | 77-78 | 78-79 | 79-80 |
|---|---|---|---|
| - Number of Schools | 2,889 | 2,962 | 3,105 |
| - Number of Centers | 174 | 175 | 154 |
| - Number Enrolled (thousands) | 1,068 | 1,094 | 1,138 |
| - Number of Meals (millions) | 125 | 137 | 135 |
| - Amount Flour Distributed (M. Tons) | 15,603 | 13,763 | 14,106 |
| - Amount WSB Distributed (M. Tons) | 3,138 | 6,778 | 6,211 |

Observations:

1. School enrollments in project schools increased 6.5% from 77/78 to 79/80 while enrollments for all Egyptian public schools increased 5.4%. This suggests the school feeding may have stimulated increased enrollment.

2. While for programming purposes it is assumed that each child gets 140 meals a year, the actual average number of meals per child was 117, 125, and 118 for 77/78, 78/79 and 79/80, respectively. This suggests overprogramming by about 17%.

Source: Ministry of Education

balanced snack would be provided for all pupils. The original plan included a nutritional education component and a phase-out plan under which the GOE would eventually supply all of the flour while CRS would continue to supply WSB.

B. Objectives of the Program:

Early proposals for the CRS - PL 480 school snack program emphasized the nutritional aspects of the program while also recognizing the educational benefits.[6/] The early statements attributed the MOE appear to suggest that the major GOE objectives were primarily educational.[7/] The MOE feels that school feeding can contribute to improved health status which in turn can lead to better academic performance. Initial AID objectives for the project are assumed to reflect the objectives of both CRS and the MOE, although available documents do not include an explicit statement of the original AID objectives of the project. No information is available on the initial program objectives as viewed by principals, teachers or pupils.

The initial objectives of the program generally have been maintained over the life of the project. However, more attention has been focused on absenteeism and dropouts because the program appears to have had a more visible impact on attendance factors than the other project objectives.

In summary, it appears that since its inception the school feeding program generally has been oriented toward the

following objectives:

(1) Increased enrollment

(2) Reduce dropouts of enrolled children

(3) Reduced absenteeism

(4) Improved school performance

(5) Improved fulfillment of quantitative nutritional needs

(6) Improved fulfillment of qualitative nutritional needs.

While it is relatively easy to assess achievement of the first three, the last three are very hard to measure. The first four are the primary objectives of CRS and AID.

## C. Logistics: Movement of PL-480 Commodities from the Ship to the Recipients:

CRS obtains the PL 480 commodities from the U.S. Government (USG) then oversees and monitors food movements within Egypt. The Inter-Ministerial Committee (IMC) receives the PL 480 wheat flour and WSB at the port and clears the commodities through customs. The IMC transports the WSB to MOE warehouses in each of the governorates in the program. The process for flour is somewhat different involving an exchange on a pound for pound basis of PL 480 white flour for "local" flour. The IMC delivers the PL 480 white flour to the Ministry of Supply

which transports the appropriate amounts of "local flour" to bakeries contracted by the MOE. CRS obtains attendance figures and other information from the MOE and instructs the IMC on the proper amounts of WSB and flour to be delivered to each governorate.

In each governorate the MOE awards contracts to the lowest bidders. The contracts cover:

1. Delivery of flour (from Ministry of Supply) and WSB (from MOE) from warehouses to bakeries
2. Baking the bread
3. Purchasing the cheese, halawa, and dates
4. Delivering baked bread, cheese, dates and halawa to District Centers for checking
5. Delivering all food to individual schools.

Contractors are paid about LE 04 (about $.05) for each meal. The number of meals prepared by a contractor is adjusted each week to reflect the average attendance the previous week of the schools served by that contractor.

In 1978/79 there were 88 bakeries - suggesting an average output of about 13,600 loaves a day for the 1.2 million pupils in the program. A number of the bakeries bake exclusively for the school feeding program. The bakeries blend the flour and WSB at a ratio of 2 to 1 under the direct supervision of the MOE "mixing committees" who observe the mixing every day at the bakeries. The baked loaves contain 100 grams of flour and 50 grams of WSB 2/.

(Due to the WSB, the loaves retain considerable moisture and the finished loaf consumed by the children weighs 210 to 230 grams). Contractors then transport the bread from the bakeries to main district centers and on to individual schools. While most internal shipments are by truck, some schools receive their bread by donkey cart. Schools receive the loaves in the morning between 7:00 and 8:30 AM for both morning and afternoon shifts.

Comments and Issues: Logistics:

1. The pound for pound exchange of PL 480 white flour for "local" flour was a major issue raised by the June 1979 USG Audit Report (6-263-79-4). The report suggested that the exchange was not according to regulations and resulted in a "windfall profit" for the Ministry of Supply. Apparently, the issue is being resolved and the flour exchange program, which is similar to the WFP exchange program, is being used during FY 81.

2. Inspections of MOE warehouses and bakeries suggest that most are of acceptable standard or better and operate efficiently.

3. Logistics of food movement appear to operate quite efficiently. Available information indicates that bread is getting to the school children on a very regular basis. However, some WSB deliveries have been late to arrive in Alexandria, consequently bread made from 100% flour occasionally has been delivered to schools (less than 3% of all deliveries).

D. At the School:

The beneficiaries of the CRS/MOE school feeding program are the rural primary school pupils of the six Lower Egypt rural governorates and those in the three urban governorates of Port Said, Ismailia and Suez.[9/] These children represent roughly 84% of the boys and 56% of the girls, aged 6 to 12 in these areas. The children receive, six days a week (roughly 140 days a year) a loaf of bread ( 200-235 grams cooked) and 3 days a week cheese (20 grams) and the other 3 days either halawa (25 grams) or compressed dates (30 grams). The meal represents very roughly 625 calories and 24 grams of protein, and if purchased on the subsidized Egyptian food market would cost about LE.04

(roughly 5¢)[10]. When delivered, the food is taken to the "food nutrition room" of the school and later distributed to classrooms. Usually the food is handled by teachers on a volunatary basis. Teachers, while enthusiastic about the program, do not like the messy food distribution chore, especially since it is beyond their regular duties and does not pay.

Most field trip reports indicate that principals, teachers and pupils are enthusiastic about the program. Teachers and school officials generally feel that the feeding program is a success in terms of school enrollments, absenteeism, dropouts and perhaps even school performance. Roughly 25 to 50% of the children have been told and now realize that the WSB in the bread (which makes the school loaf different from the regular "balady" loaf) provides them with important nutrients.[11]. On the other hand, many students dislike the taste imparted by the WSB or find the loaf too big to eat in one sitting, consequently they take the uneaten portion of the loaf home.

Comments and Issues: Food At School:

1. An informal, hand-raising survey of 3380 children in 89 classrooms of 37 schools revealed that: 43% do not eat before coming to school, 17% bring food to school, 38% take some of the WSB loaf home, and 33% take some of the cheese or halawa or dates home[12]. (However, site visits by AID staff indicate virtually all children eat all the cheese or halawa or dates and very few, if any, bring food to school). These informal survey data suggest that food supplied at school is perhaps being substituted for food which

normally would have been consumed at home. The figure that 43% do not eat before coming to school is misleading because the survey was taken at both morning and evening (afternoon) sessions. At morning sessions (8 am to noon) the question was posed, " How many of you had breakfast before coming to school?" The question for the afternoon session (12:30 to 4:00 pm) was, "How many of you ate between breakfast and coming to school?" The survey also suggests problems with the acceptability of the food and portion size. Many children dislike the WSB-wheat loaf, and consequently eat little of it and take the remainder home, often to feed to poultry 13/. On the other hand, many take the food home to feed to younger siblings. Perhaps, the portions provided are too big especially for the younger children. Field trip reports indicate that many students cannot eat the whole loaf.

2. Numerous inspections are made by AID, CRS and MOE. MOE nutrition inspectors apparently visit bakeries and schools at least once a year - there are roughly 90 bakeries and 3,100 schools in the program.

3. Perhaps serious consideration should be given to eliminating WSB from the program. Though this would lower the nutritional value of the bread, it would greatly improve the acceptability of the food and consequently might possibly add to the impact of the program on enrollment, absenteeism and dropouts. If WSB were dropped, perhaps flour amounts should be increased by 20% so that 120 grams per loaf are used and a 150 gram bread loaf is produced the same as under the WFP program. (See later section: costs of various commodity alternatives)
4. It has been suggested that the PL 480 wheat flour shipments for the CRS/MOE school feeding program might be converted to whole wheat shipments which could be milled in Egypt into the coarse grain used to make balady bread. This would result in a reduction in the PL 480 costs of the program and would eliminate any remaining controversy surrounding the current wheat exchange program (See comment No. 1 above).

5. Since 1979, CRS has been proposing that PL 480 nonfat dry milk (NFDM) be included in school feeding program. It is assumed that if NFDM were included in the program, it would be exchanged for cheese as it is in the WFP program. This would either increase or replace the cheese that is currently being provided by the GOE.

6. It has been suggested that the school feeding project might be better targeted to increase female enrollments. Though this appears to be a worthy objective, it might present some very difficult implementation problems. Obviously, food could not be provided to girls while being withheld from boys in the same school.

7. An important issue is the continued feeding of URBAN school children in the canal cities (Port Suez, Ismailia and Suez) in this rural school feeding program. The original justification for inclusion of these cities was that they had suffered during the war and consequently needed special assistance. It appears that this justification is no longer valid; available data suggest that, in general, children in these cities are better-off than those in all other parts of the country (Port Said governorate ranks first in Physical Quality of Life Index, Suez is third and Ismailia governorate is second to Damietta among non-urban governorates, - Field and Ropes, 1979). In addition, the Port Said governorate has insisted that white bread be served in schools instead of the WSB fortified "balady" bread. This can be justified on acceptability grounds since Port Said has been traditionally a white bread consuming city). A possible reason for continuing to provide Title II support for school feeding in these cities is that the

program is underway and should not be disrupted. However, this is a very weak reason because formerly rural communities in other governorates have been dropped from the program when they were officially redesignated as "urban". This being the case, can the continuation of the canal cities in the program be justified?

E. Impacts of the School Feeding Program

Qualitative information available suggest that the school feeding program has had a very positive impact. For example, teachers reported that children from schools with feeding programs tend to like school better, become more lively, participate more in class, and have fewer behavioral problems. The children themselves say that the food is good and helps them to be better students. MOE officials are also enthusiastic about the feeding program. These qualitative assessments are important. The school feeding program is very successful in the eyes of the beneficiaries and others closely involved with the activity.

On the other hand, quantitative evaluation studies are not completely consistent with qualitative assessments of the school feeding program. In 1975/76 an internal evaluation system was established to assess the impact of school feeding on examination performance and attendance in primary schools and on the physical health status of school children. The system was established by the MOE Department of Nutrition in collaboration with the National Center for Educational Research and the Faculty of Education at Ain Shams University. The comprehensive quantitative evaluations completed to date utilize large samples of pupils from project

and control areas. The control areas selected are rural in character but do not have school feeding because they are within urban boundaries.

The indepth evaluations do not provide conclusive data concerning the impact of school feeding on either examination performance, attendance, or physical health status. Lack of conclusive results appears to be more a function of inappropriate research design and data collection techniques than anything else. In other words, from the existing evaluation data it is not possible to tell what, if any, impact the school feeding projects are having. However, this does not mean that the data show that the projects are having no impact.

A sample of several hundred pupils from numerous project and control areas was used to evaluate the impact of school feeding on examination performance and attendance.[14/] While in several cases project area pupils had better exam scores (statistically significant at .01 confidence level), in as many or more cases, control group pupils scored better.[15/] In addition, there was no consistent difference between project and control groups with respect to school attendance.

For the evaluation of impact on physical health characteristics a sample of several thousand pupils from project and control areas was utilized.[16/] Anthropometric measures were taken on each student (heights, weights, mid-arm circumference) as well as blood hemoglobin levels, and a number of signs of malnutrition. The study compared project and control groups one year after school feeding commenced. The study revealed that control group children, who are more urbanized, were generally bigger and healthier than those

in project areas. However, no consistent significant impact of school feeding on physical health status could be ascertained. Three reasons can be cited why the study did not reveal consistent impact: (1) A period of one year is too short; (2) many other factors could not be controlled; and (3) measurement error might easily dominate the very small physical differences between experimental and control groups which might be expected after one year.

Comments and Suggestions: Impacts

1. Though there are no data which prove once and for all that Egyptian school feeding programs increase attendance and enrollments while reducing dropouts, these impacts are perceived to be occurring by almost everyone closely associated with the programs. In addition, it appears very reasonable that the food provides an incentive which might cause some parents to enroll their children, enforce strict attendance and prohibit dropping out, when otherwise they might not. The key question is how many parents or children are so affected by the feeding program. It seems obvious that the majority of children now in school would be there anyway if it were not for the food. Research and reviews of school feeding programs in other countries do not provide consistent and conclusive evidence that school feeding programs help school attendance or awareness in the classroom

(Maxwell and Singer, "Food Aid to Developing Countries: A Survey" World Development, V, 7, 1979).

2. The impact of food on exam performance is less clear. If food stimulates better attendance then pupils are bound to learn more because they miss fewer classes (but how many fewer classes?). Research in other countries has not been able to show conclusively that nutritional improvements correlate with learning improvements for groups other than acutely malnourished children. A recent nutrition survey 17/ suggests that there is very little acute malnutrition in Egyptian school children (who tend to be better-off than children not in school). Apparently, little is known about the impact of a school meal on children's awareness or attentiveness in the classroom and in turn this effect on learning.

3. The impact of food on nutritional status is also hard to assess accurately. As stated above, most Egyptian children in Lower Egypt do not suffer from acute undernutrition (defined as weight for height ratio less than 80% of the standard) Available information suggests that key nutritional deficiencies among school children are

anemia, and lack of protein, vitamin C, riboflavin, and calcium. Except for WSB and cheese, the school lunch program is not well targeted to meet these nutritional deficiencies. Perhaps synthetic pills containing the needed nutrients and vitamins should be supplied at school to meet these deficiencies.

Another factor is the impact of the school food on the children's consumption of food at home. It appears that by giving the pupils a large school lunch (often more than they can eat), the program reduces the amount of food the children consume at home. Thus the program provides an income supplement to the parents who otherwise would have to buy more food for their children. On the other hand, what does the program do to parent responsibility in the longer run? Do they reassume feeding after 6th grade? What are psychological effects of dependency on food programs?

F. Phase-Out Plan:

The original agreement included a plan under which CRS - PL 480 flour would be phased-out and GOE flour phased-in completely by FY 82 (the 1982/83 school year). However, because the MOE

was covering over half of the costs of the program anyway (over 75% of costs in FY81) and was suffering serious financial restrictions, the phase-out was extended in 1979 so that now the MOE will assume full costs of the flour in FY 86. The original and current phase-out plans are outlined below. The tentative working assumption is that CRS will continue to supply all of WSB for the program under PL 480.

Table III.4
Contributions for Flour
For School Feeding

| Fiscal Year | Academic Year | Original Plan | | Revised Plan | |
|---|---|---|---|---|---|
| | | CRS | GOE | CRS | GOE |
| FY 78 | 1977/78 | 100% | 0% | 100% | 0% |
| FY 79 | 1978/79 | 100% | 0% | 100% | 0% |
| FY 80 | 1979/80 | 75% | 25% | 75% | 25% |
| FY 81 | 1980/81 | 50% | 50% | 75% | 25% |
| FY 82 | 1981/82 | 25% | 75% | 50% | 50% |
| FY 83 | 1982/83 | 0% | 100% | 50% | 50% |
| FY 84 | 1983/84 | - | 100% | 25% | 25% |
| FY 85 | 1984/85 | - | 100% | 25% | 25% |
| FY 86 | 1985/86 | - | 100% | 0% | 100% |

Comments and Issues: Phase-Out Plan

1. The initial CRS proposal strategy indicated that, "If GOE failed to phase in, CRS would consider this cause for immediate cancellation of the program". It is assumed that this is still the position of CRS.

2. The revised phase-in plan apparently is acceptable to AID, CRS and the GOE and no problems are anticipated in maintaining the revised phase-in schedule.

## III. Logical Framework for MOE/CRS School Feeding Program

A. Problem:

1. High primary school dropout rates (about 20% with estimates ranging from 10 to 25%).
2. Low enrollments (about 80 to 85% of six year olds enter primary school).
3. Abseenteeism
4. Children have little to eat before coming to school; they are hungry in the classroom and attentiveness wanes. Consequently, school performance and learning are inhibited.
5. Malnutrition (chronic among some school age children) and its effect on school performance.

B. Goal:

The ultimate goal of the school feeding program is growth in learning and school performance by a growing number of Egyptian children in the target area. A later section discusses on "Objectively Verifiable Indicators" and "Means of Verification").

C. Subgoal

Four subgoals contribute to achievement of the ultimate goal:

1. Increased percentage of six year olds enrolling in primary school grade one.
2. Reduced percentage of those entering grade one who dropout before grade six.

3. Reduced absenteeism in primary schools in the target area 4/.
4. Increased attentiveness of children in school so they learn more efficiently.

D. Purpose:

The program purpose is to provide primary school children with a nutritious snack at school consisting of bread accompanied by cheese or dates or halawa. The snack is designed as an incentive to encourage school attendance and a means to provide children with a more adequate diet. The snack provides about 600 calories and 20-25 grams of protein, which constitute about one third of the minimum daily requirement.

E. Outputs:

The essential output of the program is an efficient institutionalized process which obtains commodities, moves them to appropriate locations, bakes the bread, delivers the food to schools, prepares the meals and provides them to the students in an orderly manner. The process involves several different agencies. CRS monitors and oversees the process, focusing on quantity and quality aspects of obtaining, transporting, processing, and delivering the PL 480 commodities. The MOE overseas the entire process and signs agreements with contractors who collect and process the commodities and deliver the meals to the schools. The IMC clears the PL 480 commodities through customs and ships them to appropriate warehouses. The Ministry of Supply (MOS) provides the appropriate amounts of local flour to the bakeries who fall under the MOE contracts.

F. Inputs:

Essential inputs are:

1. PL-480 commodities.
2. Monitoring and oversight by CRS and MOE.
3. Funds from the MOE to cover:
   a. Cost of all non PL-480 commodities used.
   b. Cost of transporting the commodities in Egypt.
   c. Cost of processing commodities (baking bread).
   d. Cost of preparing and serving meals and clean-up (done by MOE teaching staff).
   e. Cost of planning and administering the program.

G. Assumptions and Issues:

1. Malnutrition:

Malnutrition among school children has been identified by the MOE as a problem; however, nutrition itself is not an objective of this project. (Besides, the recent nutrition survey suggests that there is very little acute malnutrition among school children).

2. Absenteeism:

Absenteeism was identified as a problem prior to implementation of the feeding program. At present, absenteeism is relatively low, roughly 5%; it might have been closer to 10% before the project started. A future evaluation should use MOE data to assess project impact on absenteeism.

3. Assumptions Linking Subgoals to Goal:
The assumption is made that all of the subgoals (enrollments, dropouts, absenteeism, and attentiveness) contribute directly to the achievement of the ultimate goal (growth in school learning). It seems obvious that time spent in class is directly related to learning; therefore, we expect learning to increase as children spend more time in class (i.e. are more apt to enroll, less apt to drop-out, and less apt to be absent). It also seems reasonable to assume that children with food in their stomachs are able to pay better attention in class than children who are distracted by their hunger.

4. Assumptions Linking Purpose to Subgoals:
The assumption is made that the purpose (school feeding) directly contributes to the subgoals of increased enrollment, reduced absenteeism, reduced dropouts, and increased attentiveness. The assumption seems reasonable. Teachers, principles, pupils and MOE officials feel that the assumption is supported by the experience of the Egyptian school feeding program; however the statistical data available are not conclusive (discussion in earlier section). The assumption is based on the idea that the children (and parents) like the program and the food. Though almost all eat the meal and the majority eat it all, some children do not

like the taste of WSB fortified bread and consequently do not eat it (at least some of it).

5. Nutritional Health

Though not strictly a goal of the program, the nutritional health of school children is a component of the project. It is assumed that the school meal improves the nutritional health of the children. This assumption seems reasonable but is very difficult to statistically test.

6. Assumptions Linking Outputs to Purpose:

It seems very reasonable, almost tautological, to assume that the outputs (an efficient institutional process for providing meals) will lead directly to the purpose (providing meals) providing the GOE maintains its commitment (including financial commitment) and the commodities are available. The institutional process is already established and apparently operating fairly smoothly.

7. Assumptions Linking Inputs to Outputs:

The assumption that inputs (commodities, CRS assistance and GOE financial support and commitment) will lead to the outputs (institutional process) would be a monumental assumption if this were a proposal for a new project. However, the institional process is already in place and operating relatively efficiently; therefore the assumption is very reasonable for this school feeding program.

8. Delivery of Inputs:

It is assumed that inputs will be delivered in timely fashion. If they are not, the program will not succeed. Delivery of the inputs is dependent upon the budget and other decisions made by the GOE, CRS and USG.

9. Summary:

It appears that the timely delivery of inputs will lead directly to the accomplishment of outputs and purpose. Achievement of the subgoals seems probable since it is based on reasonable assumptions. An important question is determining, "How big an impact the food has on enrollment, absenteeism, dropouts and attentiveness?" Perhaps reasonable target figures for these subgoals should be specified as a means to assess program impact against some standard. In addition, achievement of the ultimate goal of increased learning seems probable; but, how much increased learning can be expected to result from the school feeding program? Unfortunately, available data do not provide a sound basis for establishing standards or expectations for levels of accomplishment of the subgoals or the ultimate goal.

## H. "Indicators" and "Means of Verification"

1. Ultimate Goal: Growth in school performance by a growing number of children.

   A. Indicator: Increase in the ratio of children passing examinations (2nd, 4th and 6th year primary school exams) to number of school age children in the district or governorate. This aggregate measure incorporates the impacts of increased enrollment, reduced drop-outs, and absenteeism and greater attentiveness in class.

   B. Means of Verification:[18] MOE has records at governorate and district level on number of pupils taking and passing 6th year exam.[19] (I assume data are also available for average exam score as well as for 2nd and 4th year exams). The 1976 census - when processed - will provide data on, or a rational means of estimating, the number of school age children per governorate and perhaps district. The ratio can then be calculated (estimated) for rural (experimental) and urban (control) groups for the last five or six years and compared. Perhaps the ratio might only be calculated for a random sample of experimental and control areas. It is hypothesized that this ratio has increased faster in rural

schools as a result of the feeding program. Data on examination results will have to be analyzed carefully. Table III.2 indicates an 18% decline between 1976/77 and 1978/79 in the total number of pupils passing the sixth year examination. The reason for this decline should be assessed to determine if it is a true measure of performance or caused by changes in the examination itself.

c. Percentage passing (of those taking examination) and average score are not good indicators of goal achievement because the slower students who otherwise may have dropped out had it not been for the school feeding program (but have stayed in school for the meal) will lower the percentage passing and average score. Therefore a successful feeding program which reduces drop-outs could result in lower percentage passing and lower average examination score.

2. Subgoal 1: Increased enrollment of 6 year olds.

   A. Indicator: Percentage of 6 year olds enrolling in primary school grade one.

   B. Means of Verification: Use MOE enrollment data on number in grade one for last 5 or 6 years for areas in program (rural) and control areas (urban). Care must be taken here because some rural areas previously in the program have been redesignated urban and therefore dropped from the program. Estimate number of 6 year olds for last 5 or 6 years in

program and control areas using data from the 1976 census. Compute indicator and compare program and control areas. Perhaps a random sample of program and control areas can be used to verify accomplishment of the subgoal. It is hypothesized that as a result of the feeding program, enrollment percentage has increased more rapidly (or decreased more slowly) in program areas than in control areas.

3. Subgoal 2: Reduced Drop-Outs
   A. Indicator: Number of cohort in grade six (and three) divided by number of same cohort who previously enrolled in grade one.
   B. Means of Verification: Use MOE enrollment data in program and control areas (or random sample thereof) to compare number in grade six in 1980/81 and number in grade three in 1980/81) with number in grade one in 1974/75 (and 1977/78). Compare these dropout rates for the last few years for program and control groups. It is hypothesized that drop-out rates are higher and have improved more in program areas than in control areas.

4. Subgoal 3: Reduced Absenteeism
   A. Indicator: Average percent of enrolled pupils absent.
   B. Means of Verification: Use MOE records to compare trends over last five years in absenteeism rates between program and control areas or sample thereof. Program hypothesis is

that absenteeism in program areas is less (and has improved more rapidly) than in control areas.

5. Subgoal 4 : Increased Attentiveness

While in class attentiveness is a very viable subgoal, there are no practical indicators for measuring it. Though the impact of a school meal on attentiveness appears intuitively obvious, research on the topic is apparently very meager and inconclusive.

6. Purpose: Provision of nutritious snack to rural primary school pupils.

A. Indicator: Number of meals served is an appropriate indicator of the program purpose (provide school children with a nutritions snack).

B. Means of Verification: CRS and MOE maintain detailed records on the number of meals provided in each district. These records provide the basis for paying the contractors who obtain and deliver the meals to the schools; consequently great care is taken in maintaining the record. Records are also kept concerning the quality of the meals and the substitution of one commodity for another (flour for WSB). Periodic inspections verify the records. There is very little problem verifying that the program purpose is being achieved.

7. Outputs: Institutionalized process for providing meals.

   A. Indicator: A good indicator of an efficient institutionalized process is performance. That the meals arrive at the schools in a timely manner and meet certain quality standards is a sufficient indicator for accomplishment of program outputs, especially since the agencies involved in the process successfully fulfilled their responsibilities with little or no outside help.

   B. Means of Verification: See same of "Purpose" above.

8. Inputs: PL-480 commodities.

   A. Indicator: PL-480 commodity amounts shipped to Egypt and transported to various warehouses.

   B. Means of Verification: CRS has detailed records of the amounts, dates and movements of the PL-480 commodities.

9. Inputs: CRS monitoring and oversight.

   A. Indicators: (1) CRS record keeping system
   (2) Site visits by CRS end-use evaluators.

   B. Means of Verification: Review of CRS records, record keeping system and site visi reports.

10. Inputs: MOE funds.

A. Indicator: Amount of MOE funds expended on school lunch program in target areas.

B. Means of Verification: MOE records on contracts signed for provision of school lunchs, payments to IMC for food transport and storage, and payments to CRS for administration. During FY81 these costs amounted to:

| | |
|---|---|
| 1. CRS Administration | LE. 130,000 |
| 2. MOE Administration | LE. 569,000 |
| 3. IMC Overhead and Storage | LE. 217,000 |
| 4. Transportation (by IMC and by MOE within governorates) | LE. 315,000 |
| 5. Local warehouses | LE 54,000 |
| 6. Contracts: | |
| a. Baking bread | LE 1,800,000 |
| b. Cheese, dates, and halawa | LE 4,200,000 |
| TOTAL | LE 7,285,000 |

## CRS SCHOOL FEEDING: POTENTIAL ALTERNATIVES FOR FY82

### I. Starting Assumptions

A. FY82 recepient level is the same as FY81 (1,195,000).

B. WSB ration: 50 g/day X 140 days = 7 kg/yr
(or 1 kg/month X 7 months)

C. Flour ration:

1. FY81: CRS provides 75% of flour,
75 g/day X 140 days = 10.5 kg/yr

2. FY82 (original plan): CRS provides 50%
of flour: 50 g/day X 140 days = 7 kg/yr

D. FY82 Prices:

| | | | |
|---|---|---|---|
| 1. Flour | - $314/MT | 3. Wheat | - $204/MT |
| 2. WSB | - $461/MT | 4. NFDM | - $419/MT |

### II. FY81 Program (at FY81 prices)

| | |
|---|---|
| WSB: 1,195,000 @ 7 kg/yr = 8,365 MT @ $369/MT | = $3,086,685 |
| Flour: 1,195,000 @ 10.5 kg/yr @ $261/MT | = $3,275,028 |
| TOTAL | = $6,361,713 |
| With 15% reduction | = $5,407,456 |

### III. Alternatives for FY82

A. Same commodities as last year but CRS provides only 50% of flour.

| | |
|---|---|
| WSB: 8,365 MT @ $461 | = $3,856,265 |
| Flour: 8,365 MT @ $314 | = $2,626,610 |
| TOTAL | = $6,482,875 |

B. Replace flour with wheat and WSB with NFDM

Increase amount of flour in daily bread loaf to 120 grams (same amount used in WFP project). Provide NFDM (to be exchanged for cheese) only for rural schools, i.e. 125,000 children in canal cities primary schools to be provided with NFDM by another donor.

Wheat: 150 grams wheat @ 82 extraction gives about 120 grams flour (actually 123 g), CRS to provide half of flour or 75 grams wheat per day.

1,195,000 X 75 g/day X 140 days @ $204/MT = $2,559,690

NFDM: 50 g/day per recipient to be exchanged for 10 g/day cheese which will be served 3 days a week in 20 gram portions,

1,070,000 X 50g/day X 140 days @ $419 = $3,138,310

TOTAL $5,698,000

C. Drop WSB and replace flour with wheat

1. Assume CRS provides 100% of wheat

1,195,000 X 150 g/day X 140 days @$204 = $5,119,380

2. Same as C1. except exclude canal cities

1,070,000 X 150 g/day X 140 days @$204 = $4,583,880

3. Same as C1. but CRS provides 75% of wheat

1,195,000 X 112.5 g/day X 140 days @$204 = $3,839,535

D. Drop WSB and continue to supply flour (increase flour amount to 120 g/day)

1. At 50% phase out:

1,195,000 X 60 g/day X 140 days @ $314 = $3,151,932

2. At 25% phase out

1,070,000 X 60 g/day X 140 days @ $314 = $4,233,348

# NOTES

1. Joint Egyptian - American Survey Team, Basic Education in Egypt. Human Resources Management, Inc., Washington, D.C., August, 1979, pp 57.

2. Ibid, page 77. MOE states that about 12% drop-out by grade six. Recent study indicates drop-out rates of 17-19%, Samir Lewis Saad, "The Dropouts from Primary Education," National Center for Educational Research" Cairo, 1980.

3. Local Evaluation Committee, Ministry of Education, "Report on the Achievements of WFP assisted Project ARE 2046 - Primary School Feeding Programme in Rural AReas", Cairo, October 1978, p. 2.

4. CRS-Egypt, "School Lunch Program Proposal", n.d.

5. "Increasing Illiteracy Rates" are very very extreme. I doubt their existence in Egypt. Assuming we are talking about adult illiteracy (i.e., illiteracy among the adult group over 15 years old) this means that literacy among those entering the adult group in any given year (i.e., the new cohort of 15 year olds) is lower than those leaving the adult group (i.e., those over 15 who die in that year). I seriously doubt that this is the case for Egypt. However, a section in an early CRS school feeding proposal entitled "Increasing Illiteracy Rate" strongly suggests that the GOE (and directly shows that CRS) define "increasing illiteracy rates" as increases in the absolute numbers of illiterate people. Preliminary results from the 1976 census indicate that illiteracy rate decreased from 70.5% in 1960 to 56.5% in 1976.

6. Attachment B of the FY 75 plan, "Primary School Feeding" indicated in its section in "Need" that:

> "A large majority (of rural school children) go to school having had only tea at home and eat nothing else until after mid-afternoon. This is the primary single factor for the poor health, high rate of school absenteeism, and low capacity of attentiveness and ability to learn".

This suggests that improved health and education were primary objectives. Another proposal document indicated that:

> "It would appear that a significant shortfall of PL 480 objectives would occur if the only input into this program was the PL 480 commodities. One of the major defined goals of the PL 480 programs is increased nutritional status and nutritional awareness. Therefore, the nutritional education component should form an integral part of a school lunch program".

This statement was followed by a proposal for funding of a "Nutrition Education" component of the school feeding program to be funded under PL 480 section 204. Thus it appears that nutrition was a major initial objective of the school feeding program. However, reduced dropouts and absenteeism also were identified as key CRS objectives.

7. The MOE placed great emphasis on the need for a free lunch program as a means to reduce drop-outs (MOE, "Drop-outs in Primary Education and their Relation to Waste in Educational Resources", Cairo 1979). Mr. Salah Eldin Hassan, Director General of Primary Education was quoted as saying "I predict that if we resume the previous primary school feeding project, especially in rural schools, we will be able to realize our objectives which aim at encouraging children and preventing them from dropping-out of schools".

8. In Port Said, the bread loafs are made of 150 grams of white flour, apparently because the school officials and children are reluctant to accept bread made from the WFB - "local" flour mix or the 100% "local" flour baladi bread.

9. The other children, presumedly in lower income groups, do not attend school and consequently do not receive food under the program. However, it should be realized that most children fed under the program are poor by world standards. On the other hand, Port Said and Suez governorates ranked 1 and 3 respectfully in quality of life - with Alexandria second and Cairo fourth (Field and Ropes, "Development in the Egyptian Governorates: A Modified Physical Quality of Life Index", mimeo, January 1979 and forthcoming in L'Egypte Contemporaine).

10. The income effect of the program is about 2% of annual median income (LE .04/day X 140 days ÷ LE 300). This is considerable, especially for a program which is virtually nation wide in rural areas where incomes are lower. For the poor rural majority the income effect might be as high as 5%.

11. Though a nutrition education component was proposed several times under the CRS - PL 480 program, it was never implemented. The children take nutrition as part of their regular curriculum. Their teachers have told them about the nutritional value of WSB.

12. Aboulmagd, Noha, "Report on the CRS/Government of Egypt Rural School Lunch Program 1979/1980", CRS, Cairo, n.d., mimeo, p. 8.

13. Ibid, p. 2. Due to problems of acceptability, WSB is no longer used in the bread served in Port Said.

14. See note 3. Also see two studies (in Arabic, one for 1977/78/79 and one for 1979/80) on the impact of the CRS school feeding project on educational performance.

15. One potential problem here stems from the dual objectives of school feeding: (1) increasing performance and (2) reducing dropouts. In Egypt dropouts tend to have weak academic records (Basic Education Report, p. 78). Consequently, if school feeding stops potential dropouts from leaving school, then the average examination performance in schools with feeding might be expected to decline (because the potential dropouts, who stay in school to get the food, will bring down the average). Needless to say, it is not easy to design and conduct an evaluation which can assess accurately the achievement of the objectives of feeding programs.

16. See note 3. Also see Evaluation Committee report on the impact of the CRS school feeding project on the physical characteristics of primary school pupils (in English, but title page so blurred that exact title is not legible).

17. Nutrition Institute/CDC, Nutrition Status Survey, 1978, Ministry of Health, Cairo.

18. The previous section on "Impact of the School Feeding Program" (Section II.E.) describes existing in-depth evaluation studies which attempt (unsuccessfully) to assess impact on school performance. These studies should be analyzed carefully before any additional evaluation work is undertaken.

19. However, examinations are not the same in all Governorates and many are revised annually and manipulated so that promotion rates are kept in line with the capacity limitations of preparatory schools. Thus goal achievement may be extremely difficult to measure using exam scores.

# CHAPTER THREE: MINISTRY OF HEALTH - CRS MATERNAL CHILD FEEDING

## I Background

### A. Brief Overview of Maternal Child Health and Nutrition Status in Egypt

The crude mortality rate in Egypt (1975) was about 12 per 1000 person, or about the worldwide average. However, maternal mortality is relatively high at one per thousand births. And infant mortality officially reported at 116 per 1000 live births, and possibly as high as 180 in reality, is well above the worldwide rate of 85. Deaths among children under age five account for one-half of total deaths with mortality in the second year of life reported to be 64 per 1000.

Gastrointestinal diseases are the number one cause of death with more than 50% of infant deaths due to diarrheal illnesses.

Infection and toxemia are two of the leading causes of maternal death; complications associated with childbirth are also quite common. Anemia is not infrequent among pregnant women and may persist into the next pregnancy with a negative effect on outcome. High fertility rates, 145 per 100, exacerbate maternal health problems.

Results of the 1978 National Nutrition Survey by the Nutrition Institute of Egypt and the U.S. Center for Disease Control indicate that about half, 47.3%, of children under age six suffer mild to severe protein-calorie malnutrition as measured by weight for age. Chronic malnutrition (less than 90% height for age) was evident in 21% of this age group. Acute malnutrition was less significant with 2.3% having less than 85% of median weight for height. A follow up survey was conducted in 1980 to investigate seasonal difference in malnutrition rates (the 1978 survey conducted between December

and April, a time of lower diarrheal incidence). The 1980 follow up survey results do suggest generally higher rates of malnutrition (as measured both by weight/age and weight for height.

Rates of malnutrition are also concentrated within the 12-23 month age group, with 18.5% of that group having moderate to severe malnutrition (2nd and 3rd degree according to Gomez weight for age classification) compared to 8.8% among the total 6-72 month age group.

Breastfeeding is a nearly universal infant feeding practice in Egypt, with exclusive breastfeeding common well beyond six months. Exclusive breastfeeding during the initial half-year of life is a vital source of health protection for Egyptian infants. However, after this period, growth starts to lag among children who are not given additional food to supplement breastmilk.While such children may have only borderline malnutrition, the implications are severe, given the high probability of their encountering infectious disease. The synergistic relation between poor nutrition and infection is grimly evident in the Egyptian context.

B. The Egyptian Health System

The health infrastructure in Egypt is impressive in terms of its geographic accessibility. There are over 2400 health facilities nationwide.

In rural areas the facility to population ratio is 1:9300 persons, with all villages either directly covered by a clinic or within a distance of 3 km. or less. There are three major levels of rural health facilities: units, centers and hospitals. All provide Basic Health Services, defined as: Health Education, School Health, Communicable Disease Control, Endemic Parasite Disease Control, Environmental Sanitation, Curative and Emergency Medical Care and Maternal Child Health Services. (The latter is, of course, the primary focus of this report since the CRS-sponsored food distribution is part of the MCH health services).

In urban areas, unlike the rural system of multipurpose clinics, MCH services are provided through special MCH centers which typically serve a large population (e.g. two to three hundred thousand) with a ratio of about one physician per 49,000 population.

Rural Health Units are staffed by a doctor and usually 2 nurses, a sanitarian and a lab assistant. Rural Centers may have an additional doctor, one or more additional nurses, a lab technician and a clerk. Urban MCH Centers typically have one to several doctors with several nurses and other auxiliary personnel.

Services are provided free of charge making them financially as well as geographically accessible.

Outreach by health personnel is not characteristic of Egyptian clinics (with the exception of postnatal check-ups by nurses). Also while the system is based on academically qualified staff (e.g. auxiliary nurses are being replaced by nurses), the knowledge, skills and motivation most appropriate for rural practice

## C. Recent AID Support to Improve Health Services

### 1. Strengthening of Rural Health Delivery System

This 87.8 million project, signed in 1976, is designed to identify and remove the constraints to the effective delivery of health services in rural areas. The project assists the MOH address such constraints as communications, transportation, supervision and management, as well as to identify incentives for better performance by the personnel of the rural health system. Priority is given to improvement in MCH, school health and family planning services. The project is active in four demonstration Governorates (Beheira, Dakahlya, Fayoum and Assiut). It is anticipated that the lessons learned in this activity can be applied widely to the rural health system throughout Egypt.

The project has included pilot activities of particular importance to the MCH program: (a) an oral rehydration pilot activity using both home-prepared and prepackaged rehydration mixtures; (b) design and trials of health education messages and materials and (c) the recent institution of weight charts and growth monitory in a select group of clinics.

### 2. The Urban Health Project

A Grant Agreement for this activity was signed November, 1978. This project with a total cost of $25 million, is designed to improve the delivery of urban health services, particularly maternal-child health, family planning and nutrition services, initially in three demonstration districts of Cairo, with possible later expansion to the Greater Cairo and other urban areas. The activity emphasizes community involvement, the use of home visitors, the delivery of health services in the neighborhoods where people live (outreach) and cooperation between the health services of Cairo University and the Ministry of Health.

are generally deficient among both doctors and nurses. As a report by Mobarak et. al. on "Strengthening of Rural Health Services"Notes:" Causes of death in the preschool age are assigned haphazardly and, when closely examined at the individual health facility, frequently make little sense. Vital treatment components such as rehydration in the management of diarrheal disease was only recently (summer 1978) introduced by the ministry and is implemented only on medical advice. Little, if any, screening is done by paramedical personnel and the physician, generally, sees every patient coming to the facility."*

Public health services generally have low prestige. For deliveries, the traditional midwife, or daya, is preferred over the nurse. Those who can afford to do so, use a private physician rather than the free government one.

Poor quality services is certainly one of the reasons for low prestige as well as under utilization of clinics. Public health employees, as other governmental employees, are poorly paid and often have outside jobs (or practices) in addition to their clinic responsibilities. Poor pay is accompanied by poor motivation, which in turn is exacerbated by inadequate supervisory and logistical support.

## II. Description of MCH Food Distribution

### A. Overview

In 1974 Catholic Relief Services (CRS), in collaboration with the Ministry of Health and the National Nutrition Institute, instituted a pilot MCH feeding program in the Beheira Governorate, providing PL 480 Title II commodities as food supplements to pregnant and lactating women and children under 6 years. 1/

Based on an early positive appraisal of the pilot program, the GOE requested CRS to expand the program to cover all Governorates. A five year agreement was signed and the expanded program began in January 1975; the initial agreement was renewed for an additional five year period in 1980.

The program operates through the more than 2400 Ministry of Health clinics nationwide, including MCH clinics as well as rural multipurpose health centers and units.

The 1975 beneficiary level of 228,000 has expanded yearly with the current level numbering one million (500,000 childred age 6-36 months and their mothers; see Table 1).

PL 480 title II commodity inputs to the program are valued at over $12 millon for FY 1981, representing 17,040 MT of Instant Corn Soy Milk (ICSM) and 5240 MT of Soy Oil.

Table III.1

Growth in MCH Program, 1977-81

| Year | Number of Recipients | Total Commodity Value (in millions U.S. $) |
|---|---|---|
| 1977 | 417,814 | 5.9 |
| 1978 | 460,000 | 4.4 |
| 1979 | 545,634 | 6.2 |
| 1980 | 550,522 | 6.8 |
| 1981 | 981,000 1/ | 2/ |

1/ The number of beneficiaries increased significantly as, the mother is automatically inscribed as a beneficiary together with her eligible child; the individual ration size was concurrently reduced.

2/ Actual figure for year in progress is not available.

CRS also has received a $312,000 grant under Section 204 to incorporate a nutrition education component within the MCH program. This program is described separately in the section which follows; however, in the Log Frame analysis, nutrition education is considered as an integral component with commodity distribution in the MCH program.

B. Objectives

USAID, CRS and MOH are in agreement that the ultimate objective of the MCH feeding program is to improve the nutrition status of the target MCH group.[2/]

Definition of the latter has varied somewhat since the program was initiated in 1975. Originally it was intended that one third of the beneficiaries be pregnant and lactiating women and two thirds, childred under age six. Field reports during the first two years of operations, however, revealed that over 75% of beneficiaries were mothers. Selection criteria were revised therefore in 1977, by MOH and CRS, narrowing the focus to children between 6 and 36 months. Under the current system, the mother is automatically included with her 6-36 month old child as a beneficiary. (Only one child per family is eligible.) Pregnancy and lactation are not explicit selection criteria, although a number of participating mothers are likely to either be pregnant or lactating.

The means to achieve the ultimate objective (i.e. improved nutrition status of beneficiary children) is through an increase in their consumption. This effect is intended, at least in part, to be accomplished directly by the child's consumption of the ration provided. The child's consumption may also be improved (whether or not she consumes the ICSM or oil) due to the increase in family food supply. Nutrition education is intended to enhance positive changes in child consumption. A secondary means to achieve the program's objectives is based on the food's incentive value. The distribution of food is viewed as a programmatic resource which can function as a catalyst to effect the delivery of complementary MCH services,which,combined with food supplements,enhance prospects for achieving the project's objective.

Food would also serve as an inducement for the intended beneficiaries to attend clinics and have access to an entire package of preventive health and education services.

C. Criteria for Program Participation

Current program guidelines suggest a maximum level per clinic of 300 beneficiary families (i.e., 300 children plus 300 mothers). Actual levels range from about 120 to somewhat over 300.

Children are to be selected from the eligible age group (6-36 months) with the application of two additional selection criteria:

1. Below normal weight and growth
2. Low economic status of the family and mother's ignorance of sound health practices. 3/

Program norms further stipulate that beneficiaries should remain in the program for a period of one year, with the period of participation extended as warranted by the child's health status.

D. Commodities

From FY 1975-79, the ration per recipient was as follows:

| Commodity | Monthly Ration | Calories Per Day | Protien Per Day |
|---|---|---|---|
| WSB | 4.0K | 480 | 26.7 |
| Bulgur | 2.5K | 295 | 9.3 |
| Oil | 0.9K | 265 | - |
| | | 1040 | 36.0 |

In FY 1980, responding to required budget cuts reducing the level of PL 480 inputs for the program, MOH and CRS decided to reduce the total ration size. ICSM was substituted for WSB which had had some acceptability problems and bulgur was eliminated. The oil ration remained roughly equivalent. The reduction in ration size however, was coupled with the decision to include the mother along with her child as a beneficiary.

Therefore the ration per family unit is as follows:

| | Monthly Ration | Calories/Day | Protein/Day |
|---|---|---|---|
| ICSM | 2.84 K | 360 | 18.9 |
| Oil | .874K | 258 | -- |
| | | 618 | 18.9 |

The commodity changes were designed to have a positive effect on program logistics. Only two, instead of three, kinds of commodities have to be transported, stored and distributed. The ration size was adjusted such as to allow one 50 lb sack of ICSM and two tins of oil to be shared among 4 families at the bi-monthly distribution. This obviated the need for re-packaging, measuring, etc. in the clinic. Foods are distributed in bulk (full bags and tins) to groups of 4 mothers. Beneficiary levels at each clinic are established based on numbers divisible by 12 so that oil deliveries can be made in full cartons (6 tins per carton).

E. Program Logistics: From Port to Clinic

Commodities for the MCH program are received and cleared through customs at the port in Alexandria [4/] by the Inter Ministeral Committee (IMC) which is responsible for delivery of commodities to each Governorate based on issuance of delivery orders from the MOH. Upon receipt of commodities, IMC initially stores them in either of its two warehouses in Alexandria or its regional ones in Tanta, Minya and Cairo.

IMC provides CRS with monthly warehouse receipts and distribution statements.

Health officials at the Governorate level (i.e. the Health Zone) are responsible for the commodities upon their delivery to the Governorate. Each Health Zone maintains governorate-level warehouses for receipt and storage of the Pl 480 Commodities. Transport of the food to individual health centers is also the responsibility of the governorate Health Zone. Procedures and facilities vary; in some cases delivery is made directly to centers from the governorate level warehouses; in other cases intermediate district (markaz) level warehouses are used. Some Governorates have adequate transportation and storage; others have problems with both. Transportation is either provided by the Health Zone's own vehicles or is contracted; the latter seems to be associated with more efficient and timely delivery.

Inventory records are kept in Zone (and where applicable, Markaz) warehouses. Health Zone officials record commodity distribution to clinics and collect and aggregate information on distribution within clinics.

F. Program Operations in the Clinic

The Chief Medical Officer at the clinic is responsible for food distribution operations within the clinic.

Chart III.1

MAJOR RESPONSIBILITIES OF KEY PARTICIPANTS IN MCH PROGRAM

| INSTITUTION | RESPONSIBILITY |
|---|---|
| MOH | Establish program norms and procedures<br>Determine beneficiary levels by governorate<br>Provide budget support for administration and logistics<br>Supervise and monitor program |
| CRS | Initiate commodity orders (calls forward) and provide IMC with bills of lading. Supervise program at all levels and commodity movement from port to recipient. Administer program |
| IMC | Receives/clears commodities through customs. Storage in control/regional warehouses. Delivery to Health Directorate at Governate level warehouses. |
| Governorate Health Zones | Storage of commodities in zone/markaz<br>Transport to clinics<br>Determine clinic recipient levels<br>Collect and aggregate clinic information on distribution for MOH |
| Clinics | Maintain food inventory and other records<br>Select and monitor beneficiaries<br>Distribute bimonthly allocations |

Upon receipt of the commodities, clinic personnel issue a receipt to the transporter, with a copy forwarded to IMC. The center maintains an inventory record of commodity receipt and distribution.

Distribution to beneficiaries is bimonthly (6 distributions as allocations per year) scheduled according to actual arrival of the commodities. Instructions from the MCH Director at MOH are that distribution take place as soon as possible after the food is delivered to the clinic.

Distribution to beneficiaries is generally accomplished through designation of specific distribution days. The logistics and recordkeeping required for this activity generally monopolize clinic staff time for those days.

Mothers arrive in groups (self-selected) of four. Their beneficiary IDs (notebooks in some cases) are grouped accordingly by clinic staff and checked against beneficiary lists. A distribution list for each allocation is drawn up identifying the date, allocation number (1-6) and beneficiaries' names with signature or thumbprints as receipts. The date and amount of food received are also noted on each beneficiary's individual ID card or notebook.

As mothers check in by groups of four, clinic staff collect the nominal sum required for the empty containers (2 tins and 1 bag per group.

The prices set by the Ministry of Health areas follows:

| Type of Container | Price (Piasters) |
|---|---|
| Oil Tin | 4 |
| Carton | 3 |
| Flour Bag | 2 |

Proceeds of the sales go to the Governorate which retains 70% for use in the program. 30% is remitted to CRS' account with IMC.

Full bags and tins are distributed to the mothers who bring their own containers to carry the food home (or use the just purchased empty container). Upon receiving the bag of ICSM and 2 tins of oil, the four mothers divide the food among themselves, often just outside the clinic door. This operation appears to run smoothly in rural areas, but some problems are reported by urban MCH clinics--e.g. primarily having to do with the social stigma of bulk distribution concern about hygienic aspects of repackaging bulk commodities, the fact that beneficiaries are less known to each other, etc.

G. Beneficiaries' Use and View of Commodities

The consensus among those associated with the program (beneficiaries, clinic staff, CRS, MOH and USAID personnel) is that ICSM has proved to be a more acceptable commodity than WSB. It is especially more acceptable for use as the primary ingredient in a pudding or porridge for small children. The ICSM, like WSB previously is also used in baking, partially replacing regular flour, in cookies and cakes.

Given these usages the child beneficiary is relatively more likely to benefit by directly consuming the ICSM. Mothers reported that the flour (a 2 month ration) lasted them up to a month.

ICSM is undoubtedly better utilized by mothers attending clinics where the nutrition education program is operating since the latter includes formal food demonstration with ICSM. However, CRS end-use evaluators report that some clinics have neither received nor passed on to mothers any information on how to prepare ICSM. (Distribution of the new program manual for clinics including information and recipes for ICSM was just beginning during this reviewer's visit.)

Oil, on the other hand, it is generally agreed, is used as part of the family's general food supply. It is consequently used up quickly (within days) and is highly appreciated. It is generally postulated that the incentive value of the ration is due to the oil.

Mothers expressed a preference, if given a choice, for a food whose value and use is more familiar than either WSB or ICSM, most often suggested are powdered milk or wheat (balady) flour. From the beneficiaries viewpoint, ICSM, in terms of its usage as well as its perceived economic value, is probably more like the latter than the former.

H. Program Impact

No attempt has been made, nor indeed been possible, to measure the program's impact on improving the nutrition status of the 6-36 month old children beneficiaries.

The program is an ambitious one in terms of its size, national scope and the accompanying logistical system required.[5/] The emphasis of program managers to date has necessarily and understandably been on program efficiency. This is not to deny shortcomings in the program design but is suggestive of the dynamics of the program: a movement in the direction of demonstrating impact with efficiency improvement as an intermediate step.

The MOH and CRS program managers acknowledge the importance of impact monitoring and indeed are working to institute a systematic means for doing so through the institution of growth surveillance (weighing and the use of growth charts) in MOH clinics. It is anticipated that even if bureaucratic/political or technical reasons further delay national level implementation of the system, growth surveillance (i.e. impact monitoring of the program) will be instituted on at least a pilot scale.

## III. Description of Nutrition Education Component

### A. Project Background and History

In June 1979, a Grant Agreement (Grant No. 263-899-935-9605) under Section 204 of PL 480 Title II was signed between USAID and CRS providing LE 218,075 for implementation of a Nutrition/Health Education Project in Egypt.

The project has been amended to extend its completion date and is now scheduled to terminate in August, 1981. A proposal for a Second Phase is currently being prepared with the intention that it be submitted and approved prior to the original project's expiration.

The current project was several years in the planning stage, beset by a series of delays. An initial Transfer Agreement between USAID and CRS was signed in September, 1977. CRS was then to sign an implementation agreement with the MOH, with staff selection and other project start-up activities expected to require six months. However, the Minister of Health was replaced shortly before CRS signed the agreement; with AID and CRS had to renegotiage its intended implementation plan with a new Minister. A resolution of issues (principally one in which MOH rather than CRS assumed direct responsibility for the five regional nutritionist positions under the project) finally resulted in a signed agreement in May, 1978. However a project director and co-director were not named by MOH until November of that year.

In spring of 1979, final selection of the five regional nutritionists was almost complete, but there had still been no expenditures under the project. Despite CRS' and the Mission's last minute efforts to get an extension, the Grant Agreement expired and a new agreement had to be readied.

B. Objective

"The overall aim of the project is to strengthen the government's MCH services through introduction of a practical nutrition education program in conjunction with the existing Title II food distribution. The ultimate goal of the nutrition education program is improvement of family health, in particular the nutrition status of children of pre-school age."[7/]

C. Implementation

A logical framework was prepared as part of the original proposal (1977) and spells out objectives at the Goal, Purpose, Output and Input levels (a copy is annexed to this report). A major change is that the Regional nutritionists are under MOH (the Nutrition Institute) rather than CRS direction.

A project director and co-director from the Nutrition Institute, each devote part-time to directing the CRS project. The five regional nutritionists are also Nutrition Institute staff secunded to the project. They are responsible for field and supervision of Nutrition Organizers who operate at the Governorate level.

The Nutrition organizers are personnel identified from 19 governorates and selected for training in an intensive three month nutrition course at the Nutrition Institute (see Table 2 for description of course content) followed by one month of supervised field work. The training was completed in March, 1980. Drop-outs among the group of trainees has been minimal; there are currently 28 active nutrition organizers.

Nutrition organizers work together with clinic staff to cover the 165 centers (approximately 7-8 per Governorate) where the Nutrition Education program is being implemented.

Two week training courses were held regionally to train clinic level staff (192 nurses) from the 18 Governorates (see Table 3) involved in the program. The training was carried out by the nutrition organizers with assistance and supervision from the five regional nutritionists. Course content centered on practical,applied nutrition especially as related to the feeding of young children.

The nurses then initiated classes for the various MCH clinic populations: pregnant women, mothers with children under 6 months; mothers with children from 6-12 months; mothers of children aged 1-5 years. (This breakdown corresponds with the designation of clinic days for specific groups within the MCH category.)

Table III.2: Outline of Course Content for Training of Nutrition Organizers

Nutrition and Dietetics

1. Ecological and psycological factors in food consumption
2. Complete diet, its component, sources, etc.
3. Digestion, absorption and excretion
4. Daily requirements for different nutrients
5. Nutritive value of different foods: cereals, vegetables, fruits, milk and milk products
6. Nutrition and its relation with health. Growth, production, and resistance to infection.
7. How to prepare a complete and balanced diet
8. Malnutrition
9. Nutrition in pregnancy, lactation, infant nutrition, weaning foods, etc.
10. Health of the mother and its impact on the offspring

Nutrition Education

1. Methods of nutrition and health education
2. Food habits
3. Principles of psycology
4. Ecological problems and their impact on health and nutritional status
5. Nutrition educators and their role in the community
6. Growth charts and their importance in nutrition education

Food Hygiene and Regulations

1. Disease - transfered from food to humans
2. Food sanitation and food poisoning
3. Food storage
4. Effect of storage and processing on the nutritive value of foods
5. Food regulations

Table III.3: A List of Governorates with Representatives at the Nutrition Education Training Course

| | |
|---|---|
| Alexandria | Port Said |
| Cairo | Ismailia |
| Gharbeya | Mersa Mathrouh |
| Dakhaleya | Fayoum |
| Kafr El Sheikh | Beni-Suef |
| Sharkeya | Assiut |
| Menufia | Qena |
| Kalubeya | New Valley |
| Suez | Giza |
| | Aswan |

Clinic nurses, with assistance from Nutrition Organizers, hold classes for each group based on a cycle of 12 lessons. An Arabic translation of WHO's Messages for Mothers adapted to the Egyptian context,[8/] serves as the basic manual for the nurses.

The nutrition classes also include food demonstrations; the 165 clinics were provided with utensils and basic equipment and are given a monthly stipend of LE5 to purchase ingredients. Demonstrations include recipes and preparation of dishes utilizing the PL 400 commodities distributed under the MCH food program.

Participants in the nutrition education classes are not synonymous with food program beneficiaries. The eligible range of participants in nutrition education classes spans the total MCH group: pregnant and lactating women to mothers of children under age six. On the other hand, not all food program recipients (120-300 families per clinic) are accomodated in nutrition education classes.

In other words there is some slippage in the linkage between the food distribution and nutrition education component at the field operations level. This slippage reflects the lack of direct linkages at the national level where the food distribution is under the auspices of the MCH Director of MOH and the nutrition education is the responsibility of the Nutrition Institute. CRS is currently working to forge more

formal ties at the national level through formation of a program steering committee.

D. Impact: Results to Date

Achievements to date under the project can be identified at the output and purpose level (i.e. primarily process indicators). These include:

(1) Nutrition Education classes conducted at 165 health clinics by trained clinic staff;

(2) 28 nutrition organizers provided with salary, trained and operating in their respective areas;

(3) Five regional nutritionists project director and co-director supervising the program with four regional offices established and equipped in Alexandria, Port Said, Assiout and Cairo Governorate.

(4) 165 centers equipped with essential equipment for food demonstrations (as well as training kitchens equipped at the Nutrition Institute and at the Beheira Governorate.) LE5 supplied monthly to participating centers for supplies for demonstrations, etc.

(5) Transportation for project director, regional nutritionists and nutrition organizers assured through provision of 29 vehicles.

With respect to impact, measurement based on growth charts has not been attempted given the continuing lack of adequate weight charts, equipment and trained personnel. However, the Nutrition Institute has conducted an evaluation focussing on consumption behavior change in 8 of the 18 participating Governorates. Preliminary findings are available and a more complete analysis is in process; results will be presented as part of the proposal for the Phase III project within the next several weeks.

Mothers from 3 clinics in each of the selected Governorates were interviewed, (data was actually collected in all governorates, but analyzed only for the selected 8 Governorates), two of the clinics being program participants for nutrition education and one control. Mothers at the program clinics who did not attend classes provided an additional control. Approximately thirty mothers, randomly selected, were interviewed by the Nutrition Organizers at each clinic. Interviews included questions on class attendance, breast feeding, supplementary feeding and a 24 hour diet recall.

E. Al Azhar Nutrition Project

CRS is currently supporting a pilot project in nutrition education designed as a pilot test of several models of nutrition education. This pilot project is intended to provide useful information about optimal lesson content, methods, format, etc. for nonformal nutrition education of mothers which can be integrated into the ongoing nutrition education component.

In June, 1977, CRS signed an agreement with the Al Azhar International Islamic Center (Al Azhar University, Cairo) for a joint Nutritional Commodities Distribution Program in 4 villages of the Kaluibeya Governorate (Tanta, El Gezira , Akiad Degwa, Gaziret El Ahrar and El Ragalat) which serves some 5000 MCH recipients. CRS is providing support through its Nutrition Education Project in addition to PL 480 commodities. Two social workers from the Islamic Center were trained as nutrition organizers. Field research has provided basic socio-economic information about the villagers as well as some specific information on nutrition beliefs and practices.

In May, 1981, Nutrition Education classes were initiated for mothers of children under 2 years of age in the largest of the villages, Tant El Gezira, where there is a health unit headed by a cooperative doctor. (One of the other villages is being followed as a control). The two social workers conduct the nutrition education classes held on a bi-weekly basis for six different groups of mothers, grouped according to the age of their children. (All of the mothers receive Title II commodities). An additional class is held for grandmothers (many young mothers live with their mothers-in-low and are greatly influenced by their views on child care). Variations in course content, format or methodology (lecture, participatory, use of audio-visuals, etc.) are being tried out with the various groups. Children are weighed and growth curves are charted as part of each

class; some mothers keep their own charts while others are kept at the clinic. An additional variation being tested is the use of a home environment for classes with a small group of mothers who live close to each other. A baseline questionnaire is filled out on each participant; it will be readministered after the 6 month session (12 classes).

F. Plans for Phase II

A preliminary sketch for the Phase II proposal has already been prepared. Under Phase II, all activities and services executed during the first phase would be continued with the integration of the following additional activities:

1. A second training course for new nutrition organizers from the not yet included Governorates in addition to the substitutes for possible drop outs.
2. Extension of the activity to 235 new centres in both new and old Governorates. This would make a total of covering 400 centres during the coming year. This is to be followed at the rate of covering 200 centres per year through the fifth year of the project.

* Further details are available in the "Proposed Nutrition Education Action Plan: Al Azhar Project" by S. El Rihawi and Z. Awaad.

3. Training courses for local nurses will be conducted immediately in the previously involved Governorates. In the newly involved Governorates, this will await the training of the new organizers.
4. Refresher course for the old organizers for 7 days. This is to be held centrally at the Nutrition Institute.
5. Seminars to be held at the regional levels for orientation of specialist and top head administors about the project and to get feed back from them, (twice/year).

Phase II would cover a four year period and require a total budget of approximately LE 664,000.

G. Related Nutrition Education Activities Planned for the Future

CRS is also in the early exploratory stage of a pilot (one governorate) community nutrition action/education program with the Ministry of Education. As envisioned, this program would enhance the proposed MCH nutrition education program, reinforcing messages regarding early childhood feeding and hygiene/sanitation issues.

The primary school would serve as an outreach vehicle for projects involving students and other members of the community. Local personnel from other Ministries, especially Health and Agriculture are to be involved as well. In addition to educational messages, these would include complementary

action such as gardens, other food production or income generating activities. MOE had earlier proposed a more traditional nutrition education program limited to the classroom, the recent explorations represent a promising new initiative.

A separate project involving community nutrition action is also in a preliminary discussion stage. It would be implemented in a single governorate and would incorporate nutrition education in the context of production oriented community activity for example, initiating community gardens on unused land along canals, fish farming, etc.

## IV. Logical Framework

### A. The Problem

1. Malnutrition as measured by anthropometry is concentrated in children under age 3. Specifically 78.5% of the 12-23 month age group was classified as moderately or severely malnourished according to the Gomez Scale by the Institutes of Nutrition/CDC national survey in 1978. This compares to a rate of 8.8% for the general under six population.[9/] Acute malnutrition (measured by low weight for height) is also concentrated in the same age group.

2. Both infant and child mortality rates are quite high. The officially reported infant mortality rate of 116 per 1000 is probably low. Second year mortality is reported as not less than 40 (elsewhere at 64) per thousand.[10/]

3. Gastroenteritis; diarrhea and infection are the major culprits behind the persistently high infant/child mortality and morbidity statistics. The synergism of infectious disease with poor nutrition, however, is well-known. And evidence available to date for Egypt does not permit ruling out inadequate consumption inadequacy as a contributing factor.

4. There is no reliable data available on actual consumption levels. The Nutrition Institute is currently undertaking two consumption surveys which should contribute to filling this lack of essential data. One study, with WHO funding, will specifically examine consumption among the

under 2 population. The other is a study of household level food consumption, which will also look at individual consumption among the adult male and female and the youngest child over age 2. Information from this research is expected to be available by the end of 1981.

While per capita consumption in Egypt as reflected by Food Balance Sheets is more than adequate,[11] consumption among weaning age children in low income households probably deviates most significantly from the norm. Socio-economic data from the National Nutrition Survey indicated that the highest level of both chronic and acute malnutrition in the 12-23 month age category was found among children still breast-fed but not receiving supplements. The survey results further indicated that 80-90% of children did not receive any semi-solid supplements until after 6 months of age.[12]

5. MOH clinics, although fairly accessible geographically generally have low prestige, are underutilized and services, as currently provided, are inadequate.

6. Basic food stuffs are highly subsidized; given Egypt's very low income levels, this subsidy has considerable importance relative to income. The marginal propensity to spend additional income on food is also significant so that access to cheap or free sources of food (especially less available or more costly commodities) in addition to rations and other subsidies remains an incentive for poor Egyptians and represents an additional income transfer.

B. Goal

At the goal level, the MOH/CRS Maternal Child Feeding Program aims to improve the health/nutrition status of the vulnerable population aged 6-36 months throughout Egypt.

C. Sub Goals

The MCH program aims to improve nutrition status through improving consumption patterns among the target group.

The program further intends to improve health/ nutrition status among the 6-36 month age group through improving the delivery of essential preventive health and education MCH services in MOH clinics.

D. Purpose

The purpose of the MCH program is twofold:

1. Provide a "take home" food supplement to 500,000 children aged 6-36 months and their mothers through 2400 MOH clinics.

2. Provide nutrition education to mothers in selected clinics.

E. Outputs

1. Adequate food logistics system resulting in timely delivery of commodities to 2400 clinics

2. Bimonthly distribution of family ration (5.68K ICSM or 1.75K soy oil) within centers; beneficiary families selected according to program norms.

3. Institutionalization of a system for monitoring program operations;

4. Nutrition education courses in selected clinics; nutrition organizers and clinic personnel trained and in operation.

F. Inputs

1. PL 480 Title II commodities valued at over 12 million for FY 81

| | |
|---|---|
| 17,040 MT | ICSM |
| 5,244 MT | Soy Oil |

2. Administrative and supervisory support from CRS.

3. MOH support (estimated at $2.1 million per year for administrative and logistical support including contracting IMC for clearance of commodities through port and storage and delivery to Public Health Zone in each Governorate).

4. Delivery to markaz and/or centers by the respective Public Health Zone in each Governorate.

G. Indicators/Means of Verification

Goal Level

1. Weight for age data will be the primary instrument for monitoring improvement in the health/nutrition status of program children. Its appropriateness as an indicator is based on several factors:

(a) The taking and recording of weight measures is relatively easy (although it does assume the availability of adequate weight charts, scales and trained personnel).

(b) Weight for age data represents an objective appropriate screening criterion for selection of beneficiary children.

(c) The use of growth charts is a potentially valuable educational tool in clinics.

(d) Growth monitoring with weight charts is very useful for following the progress of individual children and triggering timely interventions as appropriate

(e) Aggregation of data from individual charts provides the basis for monitoring program impact.

Weight taking and recording is currently not the norm in Egyptian public health clinics. Standard weight charts, suitable scales and adequately trained, motivated personnel are all currently lacking. The Issues Section of this chapter deals with this problem in more detail. While the national level institution of growth charts is delayed by lack of a ministerial level decision, there are possibilities for carrying out small scale evaluations of program impact through the use of weight taking and charts at a pilot level. The MOH Director of the MCH program, for example, has indicated his intention to establish routine use of growth charts in

combination with food distribution at least at a pilot level (e.g. 6 clinics in Cairo) in the near future whether or not a national decision is made. Routine growth monitoring carried out in other projects (such as AID's Strengthening Rural Health Services project in 4 governorates and CRS' own project with Al-Azhar University) would allow for at least selected, micro level monitoring of nutrition status changes. (Obviously, the implementation of other special services in these clinics mean that attribution issues will be even more complex).

Some clinics are weighing all children routinely despite inadequate equipment and lack of growth charts. For example, at a clinic in Giza, mothers hold children on bathroom scales and weights are entered routinely as part of diagnostic information on patients records. In other cases clinic personnel indicated their use of alternative "selection" criteria for program participations, some of which do correspond to "high risk indicators: twins, low socio-economic status of family, etc."

The degree to which such criteria are applied has not been verified; but if known, it would provide some indication about prospects for goal achievement.

Changes in infant/child mortality and morbidity levels can be monitored to supplement the nutrition status data; this should be increasingly possible as efforts to improve the

availability and reliability of this data achieve greater success.

The age profile of participant children can be monitored as a preliminary indicator of how well the program is targetted to the intended 6-36 month age group.

Subgoal: Improved Consumption

1. Achievement of the subgoal (improved consumption) will ultimately be reflected by the goal indicator (change in nutrition status as reflected by weight for age from growth charts). The latter is probably much less difficult than measurement of consumption changes, particularly at a large scale.

Consumption effects can be measured directly through dietary surveys, quantifying the target child's diet before and during program participation. While impractical on a large scale, it should be possible through special studies especially if advantage is taken of related on-going or planned research and experimental trials such as CRS's Al-Azhar project.

2. A positive impact on consumption may be effected and measured due either to direct consumption of the ration by the target child or an increase in consumption of other suitable foods even though the ration itself is used for general family feeding. The latter possibility is important to include given that the only Egypt-specific evidence available ("Report on Research in Tant El Gezira, Akyad Degwa, Kafr El Ragallat and Geziret Al Ahra, Villages of El-Kalyoubia Governorate")

reports family sharing of commodities among 100% of the beneficiaries interviewed.

3. Given the lack of data, it is problematic to identify the actual nutrient gaps which the ration intends to supply (directly or through an alternative comsumption increase). The ration, however, is based on the general norms provided by the FFP handbook with the child's ration of 1.42k ICSM and .437 k of oil per month representing daily supplement of 309 calories and 9.5 of protein (22.7% and 59.4% of RDAs for a 1-3 year old child according to FAO/WHO standards.[13/] These values can be used as approximate parameters by which to assess consumption changes.

4. Postive changes in child feeding practices can be assessed to indicate subgoal achievement. The ability to apply this indicator presupposes the identification of specific desired changes in feeding practices based on information about current behavior. If the planned second phase of the nutrition education project is focussed toward specific behavioral objectives, it should be possible to track such changes.

5. Depending on the future organization and coordinator between the food distribution and nutrition education components, it may be possible to assess the relative and combined effectiveness of the two by monitoring participants involved in either, both or neither program.

Subgoal: Improved MCH Service Delivery

The effectiveness of food distribution as a catalyst for improved delivery of a broader package of essential health/nutrition interventions will be difficult to assess Three major events would have to be verified:

(1) Improved availability in MOH clinics of adequate (incorporating some minimum quality standard), essential protective health services to the MOH population.

(2) Increased utilization of these services by the target population (e.g. immunizations, diarrhea treatment, etc.)

(3) Attribution of (1) and/or a (2) to the food distribution program.

The final point will obviously be the most difficult to pinpoint. Some qualitative measure may be found such as evidence of conscious efforts, such as setting national norms or conducting experimental trials, to link food distribution to other activities. Linkages to improved utilization rates could be explored through direct questions to clinic attenders.

Purpose/Output Level

1. Some straight forward measures of efficiency can be used to indicate progress toward output and purpose achievement, for example:

a) Food distribution - Amounts of food distributed to clinics and then to beneficiaries; regularity and timeliness of delivery, number of beneficiaries, compliance with program norms for ration size, etc.

b) Nutrition education - Number of nutrition organizers and clinic personnel trained and working in program, number of mothers regularly attending classes or completing intended cycle of classes.

2. Beyond these efficiency measures, other indicators can trace the linkages between delivery of food suplement to the intended recipient and improved consumption (or improved nutrition status).

This might be attempted through an examination of actual compliance with beneficiary selection criteria, ration type and size, frequency of distribution, duration of program participation, reported intra-family use of food, investigation of food diversions, (e.g. feeding chickens or selling commodities).

With respect to nutrition education, the changes in participants' knowledge and attitudes might be used as intermediate measures, providing greater insight than simple coverage data, but possibly more practical to measure than actual behavioriai or consumption changes (especially since the latter would ultimately be reflected by changes in nutrition status and measured by weight for age data).

3. Much of the information needed for such analysis is available in clinic records, e.g. number of beneficiaries (ages and any weight/age data or nutrition diagnosis would be on the child's regular clinic record), actual distribution figures, regularity and duration of program participation, commodity inventory information, etc. End use evaluators at CRS, as in other Title II programs, monitor the flow of commodities to the point of their distribution to beneficiaries. CRS is currently steamlining its information management system with the intent to allow more actual "end use" evaluation such as compliance with nutrition status selection criteris, the monitoring of impact through weight-taking and charts, beneficiaries' actual use of food, etc.

Participation records for nutrition education classes are not currently the norm but efforts are underway to regularize a reporting system as part of program supervision. In addition, sample surveys, such as that done for the Phase I evaluation study, can provide information to assess the delivery of nutrition education.

H. Important Assumptions:

Goal Level

1. Current nutrition status has obviously been favorably influenced by the relatively adequate and equitable access (compared to income levels) to supplies of basic foods. Improvement of nutrition status among the target group assumes that this access does not deteriorate through significant changes in the food subsidy system or food availability.

2. Similarly, general political stability is assumed as well as the non-occurance of any man-made or natural disasters which would prevent program operation, alter the balance of food availability, etc.

3. The capability to measure goal achievement on a large scale assumes improvement in clinic record-keeping, the resolution of the impasse regarding the national weight chart, and the provision of the necessary supplies and personnel training/motivation to institutionalize weight-taking in the clinics. In the interim, it is assumed, small, study-based verification of goal achievement can be undertaken.

Subgoal Level

1. Malnutrition among the vulnerable 6-36 month age group is at least in part, attributable to inadequate consumption. A quantitative presentation of their actual nutrient gaps is not possible given available data. On-going research on household and child comsumption should provide important information to verify this assumption.

2. MOH Clinics represent the best available delivery system for reaching the intended MCH target group. It is assumed that clinics will be able to provide the required package of services which will positively affect food consumption and nutrition status of the target group.

While the inadequacy of services currently provided is explicitly recognized by this analysis, the assumption refers to potential future improvement, implying the continued availability of resources in the health sector, such as those

sponsored by AID's Health program in Egypt.

Purpose/Output

5. Program records especially at the clinic level are both accurate and accessible as a means of verification. The recent AID Audit Report did not indicate basic record-keeping as a major problem area. Even at the periphery, the basic documentation for the food distribution program, such as beneficiary lists, commodity receipt and distribution, etc. appears adequate. Inappropriate and inaccurate records, however are a general problem in the clinics for reasons varying from inadequate training to non-availability of forms. Information which may not be available may include both age and nutrition status (i.e. selection criteria). The accessibleness of data varies, at least in some clinics, in a test exercise to pull out clinic records for individuals selected from the program beneficiary list proved problematic.

6. Recently instituted distribution procedures at the clinics will enhance program performance (both efficiency and impact). Prior to 1980, three commodities were distributed with measurements of each made at the Center. The new system decreases the ration amount (formerly 2 k WSB, 1.25 k Bulgur and .45 k oil per beneficiary per month compared to the current ration of 1.42 k ICSM and .437 k oil). On the other hand, distribution is far simpler for clinic personnel (positively affecting their interest and motivation), mothers perceive the new product (ICSM) as "cleaner" "tastier" and "more

suitable for child" than WSB and there is apparently less diversion (e.g. feeding chickens). The net result may be not only the intended improvement in program efficiency but possibly a net gain in nutrients actually delivered to the target child.

## V. Issues Related to Program Operations and Justification

### A. Measurement of Program Impact

A several year effort to develop and institutionalize the use of a standard weight chart on Egypt remains unresolved although recent progress toward ministerial level action is cautiously reported. If a positive decision is made, there are critical supply and personnel issues which must be addressed if weight-taking and recording is to be instituted in clinics. Scales currently available in the clinics are insufficient in number and often are unsuitable (e.g. bathroom type) for weighing children under age 3. An inventory of scales will have to be made and new equipment identified and purchased.

Clinic personnel will need to be trained to take accurate weight measurements and in the use of growth charts. Training will need to address motivation as well as technical expertise. It will be important therefore, to demonstrate growths charts usefulness as (a) a selection criteria for the food program, (b) an educational tool and (c) a means to follow an individual child's health progress (i.e. uses relevant to the clinic) in addition to presenting the charts as a device to measure program impact (not primarily an interest of clinic personnel). Considerable thought needs to be given how to incorporate weight-taking and recording in a meaningful manner (e.g. related to diagnosis/follow-up for individual children and/or as a routine part of a nutrition education class) which is least time-consuming, burdensome or disruptive to clinic operations.

While progress is being made toward national institution of growth monitoring, specific actions can be taken to ensure at least small-scale monitoring of program impact through the use of weight charts in at least some clinics. (Some specific means for effecting at least this limited measurement are discussed in the Log Frame section on Indicators).

If the concern to establish systematic monitoring of program impact results in the institutionalization of growth monitoring, that achievement will have importance well beyond the information provided on program impact. Growth monitoring has an instrinsic value whether or not it is associated with food distribution and thus contributes to improved MCH Services.

B. Appropriateness of Consumption-Orientation as a Subgoal

The synergism between malnutrition and infection is widely recognized. High infant and child mortality and morbidity rates in Egypt and the significance of gastroenteritis and diarrhea diseases as casual factors argue that emphasis be on prevention and treatment of these diseases. A reduction in diarrhea and gastroenteritis related morbidity should positively affect nutrition status (although a decline in mortality related to these diseases may temporarily swell the ranks of children with low nutrition status - i.e. new survivors).

The importance of inadequate consumption, due to generally low intake levels among the 6-36 month age group and/or specific inadequacies in weaning feeding habits (such as late introduction of solids, or weaning foods with low caloric density), as a related factor in high infant/child mortality and morbidity rates cannot easily be verified given currently available information, but it is plausible that poor consumption does play a contributing role. If, on the one hand, repeated episodes of diarrhea and infectious disease precipitate malnutrition, states the National Academy of Science report on Health in Egypt; "on the other hand, in a child with borderline malnutrition, the natural morphological and immunological mechanisms protecting the gastrointestinal tract may be weakened so as to increase the frequency or severity of diarrhea and infectious disease."[14/] Information on weaning habits in Egypt, while insufficient, is enough to suspect inadequate consumption among 6-36 month old children.

Therefore, a nutrition intervention aimed at meeting this specific consumption inadequacy would seem a potentially critical protective measure against the ravishes of infectious disease.

A further consideration, assuming some synergism between inadequate consumption and infection, is the relative amenability of each to effective intervention. A recent analysis suggested that "prevention of diarrhea at this point in time in Egypt is not a realistic way to deal with the high diarrhea-specific death rate because of the multiple sources of infection

in the community."[15/] This analysis seems to strengthen support for some consumption-oriented intervention where the basic delivery system (i.e. at least in terms of getting food to clinics and holding nutrition education classes) is fairly efficient.

C. Appropriateness of MOH Clinics as the Delivery System

Despite the impressive geographic reach and concentration of MOH clinic, their utilization rates are low, it is generously estimated that 20-25% of the population are served by the system. The clinics have low prestige due at least partly to poor quality service. Those who have other alternatives generally avoid use of the public health system. The 20-25% who do use MOH clinics are therefore most likely from poor socioeconomic groups. Their preschool childred are most likely to be those suffering from malnutrition. This deduction is supported by the results of MIT's weighing exercise which found higher rates of child malnutrition among the clinic population than those found by the Institute of Nutrition/CDC study among the general population. The clinics, then, (if only by default) do represent a means to reach the interested target group of malnourished 6-36 month old children. Moreover, alternative delivery systems for reaching these children are not easily identifiable.

The real issue is whether the clinics as a delivery system can be used not just to reach intended recipients but

improve their health/nutrition status. Food distribution alone, even if highly efficient, is unlikely to have such impact. While recognizing the latter, the program's sponsors further recognize the potential use of food distribution first as a catalyst to improve clinic MCH services and secondly as an incentive to attract people to use the clinics. (Obviously the latter in the absence of generally improved services is far less likely to achieve positive results).

Two important MCH services are particularly appropriate for alliance with food distribution: namely, growth monitoring and health/education (both are discussed in greater detail elsewhere in this chapter.) The potential represented by their combination with food distribution is much more powerful than any of them in isolation. Activation of this potential is not yet in sight; considerable attention to program design and application of additional resources is required in order to effect an integrated program. Current constraints are as much bureaucratic and political as technical but improvements are possible - and essential if the incentive value of food distribution is to be meaningfully exploited.

D. Actual vs Potential Effectiveness of the Nutrition Education Component

The nutrition education component implemented under Section 204 project funding has generally accomplished the outputs as outlined in the logical framework of the project

paper. However, there is little evidence (the preliminary information from the Phase I evaluation is thus far unconvincing) that the goal (improved nutrition status of preschoolers) or purpose (establishing framework to institutionalize nutrition education as part of MCH services) has been achieved. This is not particularly suprising since the linkages of outputs to purpose and goal were not strong in the program design. The current planning a second phase represents a particularly timely opportunity to address some of the programs weaknesses.

1. Linkages to food distribution.. There is inadequate coordination between food distribution and nutrition education both at the national level as well as in the field. Food distribution is directed by the MCH Director of the Health Ministry while the Nutrition Institute has responsibility for the nutrition education activities. While the general, ultimate goal is shared, the lack of clearly unified or complementary program norms (e.g. selection or targetting of beneficiaries) results more in dilution than enhancement of efforts.

Nutrition education in the clinics does cover information about, and demonstrations of, the commodities provided food program recipients. While important, this is far short of effective linkages between the two components.

The 6-36 month age group has been targetted for receipt of foods because of their relatively greater vulnerability (in terms of anthropometric measures, infant and child mortality). Also, food distribution recipients are (or should

be) selected based on their higher risk within this specified age category. Nutrition education is aimed at improving consumption together with complementary health measures which would positively affect health/nutrition status. Given the shared objective of the two activities and the identified "most vulnerable" group, the priority should be to use nutrition education resources in combination with food distribution as the most efficient means to achieve the ultimate objective. Providing nutrition education to the entire MCH group is a laudable goal, but, again a decision about optimal use of scarce resources is the issue.

The use of growth charts, in addition to its intensive importance for MCH services, can be utilized to forge a linkage between food distribution and the education component within the clinics would be used to screen program participants, incorporated as part of the education process and serve to monitor effectiveness both of food distribution and nutrition education.

If not practical on a large side, integration could be initiated at least on a pilot level. For example, the MCH Director has indicated his intention to initiate routine use of weight charts in 6 MCH centers in Cairo. Tying in nutrition education with that experiment would be a logical add-on.

2. Educational Methodology and the Question of Coverage

As in all programs with limited resources, there is an unavoidable trade-off between extensiveness and intensity. Phase I reached 165 centers out of a total of 2400. While the relative number may not seem impressive, it represents an ambitious task in a context where the program represented "the first effort to introduce any kind of nutrition education into the day to day work of health units in Egypt".[18/] The newness of the experience was exacerbated by the reality that clinic work is low pay and low prestige with clinic workers resistant to what is perceived as add-on work without added remuneration. In such an environment, covering 165 centers in 18 different Governorates has meant concentrating on coverage rather than impact.

The training for nutrition organizers and the clinic manual (Messages for Mothers) covered general basic important nutrition content. Fairly traditional methods, i.e. lectures and food demonstrations were used for the classes. The results are not yet clear,but impact on nutrition status has probably been very limited.

The Al Azhar Project*reflects CRS recognition that the content and methods are less than optimal and is intended as a testing ground for improving the broader program. The endeavor attempted by this small project is critical and deserves additional emphasis even if at the expense of postponing more extensive coverage. Information on general family

*See Section III for a brief description of the CRS/Al Azhar project.

and child consumption will soon be available from Nutrition Institute studies. This and other general knowledge concerning the vulnerability of the weaning age child should be supplemented through applied research to identify (1) specific content for critical messages (e.g. should we focus on the age of introduction of supplementary foods, the number of feedings, the caloric density of the foods given) (2) the feasible actions available (depending on food and other resources available in the home, mother's time availability, etc.) which can favorably affect child feeding habits and (3) the most appropriate context and methods for communicating the messages to the mothers.

The experience, including the messages and materials developed of the health education component of the SRHD,can be of particular value to the CRS program. Fortunately, there is some evidence of coordination already taking place. SRHD flannel boards, for example, are being tested in CRS - pilot education project with Al Azhar University.

Identifying truly "actionable" messages is essentially a labor intensive, trial and error process of successive approximations, obviously only feasible on a small scale. The intended trade-off to early, broader coverage would be demonstrable impact on behaviour and thus nutrition status. The intent would parallel what at least one MOH official characterized as the current focus of efforts to improve the health system, i.e. improving quality of care rather than number of facilities or activities. The plans for Phase II do yet reflect such a change in emphasis.

The project depends on clinic staff nurses serving as nutrition educators. Questions about their general motivation, time availability, credibility, etc. have been raised but not resolved. The Al Azhar Project is using special educators with the intent to identify and train village women (mothers or possibly grandmothers) to assume the role and replace the outsiders. The viability of this approach is still being tested. However, it seems both logical and possible to try out several options. Alternative delivery systems for nutrition education, whether through community education centered in primary schools as CRS is currently exploring or as part of another program - e.g. vocational training for women, as suggested by the Director of the Nutrition Institute, etc. should be encouraged as well as the exploration of most appropriate methods, content, and instructors.

## E. Appropriateness of the Current Commodity Mix

### 1. Value of Current Ration

While inadequate consumption among weaning age children can be reasonably postulated, insufficient information is available to assess the exact nature and size of nutrient deficiencies in their diets.

The inadequacies which generally prevail among this age group are probably also found in Egypt: for example, the limited bulk capacity of young children which increases their relative need for nutrient-dense diets and the calorie shortfalls in the diet of infants exclusively breastfed for a prolonged duration.

The current monthly individual ration provided (1.42 k ICSM and .437 k soy oil) represents a daily availability of

309 calories and a 915 g protein* (22.7% and 59.4% respectively of the recommended intakes for 1-3 year olds according to the WHO/FAO standards). The inclusion of oil in the ration makes available a caloric dense (as well as high cost) commodity.

These figures represent the potential; questions must be asked about actual consumption by the target child. What portion of the ration does the child actually consume? Is the donated food an addition to or a substitution of food the child would otherwise be given? If the child does not benefit by directly consuming the donated commodities, does she/he benefit indirectly through an increased consumption of other foods even while the PL 480 commodities are themselves shared among family members?

To date only impressionistic evidence is available to answer such questions. Oil, it is generally acknowledged, is generally shared among family members. ICSM, which is reportedly used in baking or in puddings or porridge, is more likely to be consumed by the target child. Actual effects on the child's overall all intake, however, are difficult to speculate, especially since ICSM is relatively new to the program (replacing WSB which had serious acceptability problems.

Oil which has minimal, at best effects, on increasing the child's food consumption, is viewed as the critical element in the ration's incentive value. (Oil is a rationed commodity of relatively high cost and therefore highly valued). Again, this view is widespread but based on impressionistic evidence.

2. An Overview of Some Alternatives

Given the level of information about how commodities are used and valued, making decisions involving changes in the commodity mix or ration size are problematic.

Reducing (or eliminating) the oil ration might be a promising alternative given its high cost and primary use as an incentive rather than for direct child consumption.* To function as an incentive, oil perhaps could be given in a lesser quantity or phased out as beneficiaries learn to value ICSM or other clinic services themselves. Cost savings if the total

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*The nutritional justification of oil as a caloric dense food useful for young child feeding is not supported by even impressionistic evidence that it is used as such.

amount of oil per year were cut by half would be $2.7 million. If sufficient time were available (i.e. before a decision is required) some trials could be undertaken to investigate how oil operates as an incentive and whether costs can be reduced while maintaining an incentive. A second alternative would be to use WPC Soy in the program instead of ICSM and oil (WPC is itself quite calorie-dense). However, questions about its acceptability as a food and its utility as an incentive would have to be explored first.

Another option would be to either reduce the amount of the ICSM ration or substitute it for a lower cost commodity. The first option is not promising given that (1) the current ration is not very large relative to the child's daily needs; (2) the current distribution scheme - a 50 lb. bag distributed to 4 families bimonthly - is based on the current ration size and (3) the potential cost savings would not be significant enough given the size of required cuts.

Replacing ICSM with a lower cost commodity might be a reasonable alternative if the commodity had similar or better nutritional value, consumer acceptance and incentive value.

Given FY 82 price information for commodities, available to the Egypt Mission and CRS at the time of this review, non-fat dried milk (NFDM) was identified as the most promising substitute for ICSM.*

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* $497/MT for ICSM, $419/Mt for NFDM. The cost information did not suggest significant savings if CSM were substituted for ICSM. However, updated cost information available in Washington suggest this substitution as a more promising alternative (while NFDM seems less promising in terms of cost savings). CSM would be essentially equivalent to ICSM in terms of use, especially since it is being used in porridges and baking rather than as an instant beverage.

3. Implications of Proposed Change from ICSM to NFDM

a) Cost. Based on available cost information, a $3.4 million cost savings is calculated, with 12,000 Mt of NFDM at $5.1 million replacing 17,040 Mt of ICSM at $8.5 million. The tonnage difference would result from reducing the monthly quantity per individual to one kilo, with two kilos of NFDM distributed monthly to each family in prepackaged containers. (Milk is currently the only commodity available in pre-packaged containers).

b) Nutrient Value. The one kilo NFDM represents a daily ration of 120 calories and 12.5 g protein compared to 180 calories and 9.5 g protein in 1.42 kilos of ICSM. The importance of this switch is difficult to assess given inadequate information about consumption deficiencies among the 6-36 month age group. (see general comments under E.I.).

There are, however several points about the use of ICSM which need to be considered in the analysis.

(1) NFDM is not an nutritionally appropriate breastmilk substitute, even if artificial feeding practices are hygienically sound

(2) Caution is needed in using NFDM for feeding malnourished young children; if accompanying caloric intake is insufficient, a malfunctioning of the child's kidney may result.

(3) Long term effects on breastfeeding should be considered even if no short run effects are expected (the Chilean experience with milk distribution did reflect such a long term, negative influence)

(4) Even if NFDM were distributed only to children over 18 months, the implications for younger siblings should be considered. Commodity discrimination by age group is less potentially effective where only one child per family is eligible (i.e. Will mothers of 2 or more young children self-select based on their commodity preferences?)

(5) The milk may well be used appropriately as an ingredient in home-prepared weaning food- eg a weaning food based on rice and milk is popular among those who can afford it. However if later program cuts or changes eliminate PL 480 supplies of NFDM, will GOE or the families themselves be able to replace it?

(6) NFDM may, as is oil, be used more for family feeding than specifically directed to the child. This may still result in increased, appropriate child consumption even though the milk itself is shared. However, how well this indirect effect functions should be considered, especially relative to the direct and indirect consumption effects of ICSM.

(7) Many of these points have implications for an accompanying education program. Programming adequate accompanying educational messages is critical if the potential pitfalls are to be avoided (and potential advantages,-see following section C-realized).

c) Economic and Incentive Value. Milk as a known, relatively expensive commodity, is presumably a more powerful incentive than ICSM (enhanced by the fact that the NFDM is pre-packaged). ICSM, despite its nutritional resemblance to milk, is used more like flour and probably valued by recipients accordingly.

From a logistical perspective, the use of NFDM has potential to greatly ease distribution logistics in clinics because it is pre-packaged. Further it could be distributed monthly and on an individual basis rather than to large groups on specified distribution days. This could strengthen the view of the food as a prescription for malnutrition rather than a handout. How well the new distribution would function and its importance in terms of program impact can only be guessed. However, it seems clear that advantages possible through individual monthly distributions won't be automatic and will need to be accompanied by other appropriate inputs, especially directed to the motivation and training of clinic staff.

In sum, a decision to change from ICSM to NFDM raises, several important and complex issues. It would be unfortunate if such a potentially consequential decision were taken without adequate consideration of alternatives.

F. Replacing Commodity Inputs with Dollar-Purchased Inputs

Discussion of this option assumes that at least program goals would be retained - i.e. improved health/nutrition status of preschoolers, with the subgoal of improved child consumption and improved availability and use of MCH services.

(Alternatives to a consumption oriented strategy might look at interventions to reduce specific nutrient deficiencies, especially anemia and/or increased emphasis on preventing and treating infectious disease and diarrhea).

The theory underlying the current program's design is that food, together with other inputs, will result in the expected impact on child health and nutrition. These other inputs include principally nutrition education and growth monitoring. Neither is currently functioning adequately; both could benefit from well directed additional inputs, for example, to support initial trials of a range of educational methods and subsequently larger scale implementation or to purchase equipment, finance training etc. for implementation of growth monitoring in clinics.

However, the food distribution is recognized by the program's managers as a catalyst for getting these other initiatives underway and as an important incentive to attract the population to the currently under-utilized clinics. Further, there is the argument (which available evidence can neither affirm nor deny) that direct provision of food is important to increasing the child's consumption given current family food supply, habits and income levels.

Consideration might be given to replacing PL 480, Title II contributions with the local purchase of commodities. Such an alternative might make more sense if Egypt's Food Balance register were different. However, Egypt is heavily dependent on imports for its basic food stuffs (including substantial Title I purchases) so dollars would finance imports not local purchases. (Rice is a possible exception).

Any phaseover would require considerable lead time (to allow for orderly transition to new mechanisms and inputs) as well as a much more thorough analysis of the points raised here.

G. Definition of Beneficiary Group: Should Pregnant and Lactating Women be Explicitly Included?

Pregnant and lactatory women are not explicitly included or selected as program beneficiaries. There is an implicit assumption that they will be included given program concentration on the 6-36 month age group. Given that breast feeding is commonly continued 18 months and longer especially in

rural areas, a significant number of women beneficiaries are lactating mothers; those breasefeeding infants under 6 months old would not be included.

The overlap between pregnant women and mothers of 6-36 month old children is unknown.

The underlying issue, is whether pregnant and/or lactating women should be targetted by the MCH program. Data are insufficient to assess whether pregnant women are under nourished although the data from USAID's Rural Health Project suggest they are not. Information on birth weights is also inadequate to judge whether low birth weight due to maternal undernutrition and leading to early child malnutrition is an issue. Knowledge about consumption is likewise sparse although some available data do point to insufficient food intake among lactating women and,to a lesser extent,pregnant women. Specific nutrient dificiencies may be more significant; anemia is clearly a problem which is inadequately addressed.

## H. National Coverage vs Geographically Concentrated Targetting

The MCH food distribution is not intentionally concentrated to areas determined (or supposed) to have greater need. There is a certain defacto bias in the program for non-related reasons: for example, the logistical limits of the large MCH centers in Cairo, Giza and Alexandria mean that while an urban MCH center may serve a population of 300,000

it can still only handle a feeding program for 300 beneficiaries. No bias toward program concentration in Upper or Lower Egypt is evident. (See Table A).

The little evidence available on which one might premise a geographic concentration in the MCH Program, such as MIT's Physical Quality of Life Index for Egypt, would support a bias similar to the defacto one in the MCH program. The four Governorates with relatively high PQLI ratings have the lowest program concentration (See Table 4). Given the current situation, it is probably more productive to concentrate on targetting through application of nutrition status criteria rather than geographic ones. If the program were to expand or be reduced significantly, further consideration of geographic variations might be warranted.

I. Program Size:

The total 6-36 month age group is estimated at 3.3 million (See Table A). The MCH program can reach 500,000 children or 15% of the target age group. However, since the program is intended to be targetted to children with low weight for age, the potential coverage of that group is more significant. In the absence of an Egyptian standard weight chart, potential coverage can be assessed relative to numbers of children estimated to have 1st, 2nd and 3rd degree malnutrition (Gomez scale). According to data for National Nutrition Survey: 53.7%

Table III.4

Distribution of Recipients and Target Group Aged Population For CRS/MOH/MCH Feeding Program

| Governorate | A. Estimated No. of Recipients 1/ (mothers + children) | B. Estimated* Population Aged 3-36 months 2/ | C. Child Recipient as % Child Population | D. Physical Quality Of Life Index 4/ |
|---|---|---|---|---|
| Giza | 48,408 | 227,400 | 11% | 47 |
| Ismailia | 8,808 | 33,100 | 13% | 50 |
| Matrouh | 8,016 | 10,600 | 38% | - |
| Dakahlia | 97,200 | 256,900 | 19% | 47 |
| Sharkeya + El Axhar | 102,864 | 246,400 | 21% | 39 |
| Menoufia | 63,624 | 160,700 | 20% | 36 |
| Fayoum | 41,208 | 107,200 | 19% | 33 |
| New Valley | 7,200 | 5,400 | 67% | - |
| Red Sea | 3,600 | 5,300 | 34% | - |
| Suez | 4,800 | 18,200 | 13% | 66 |
| Kaluoubia | 43,608 | 157,400 | 27% | 39 |
| Port Said | 2,400 | 24,700 | 5% | 76 |
| Souhag | 64,416 | 180,900 | 18% | 35 |
| Aswan | 33,600 | 58,300 | 29% | 37 |
| Assiut | 56,016 | 159,400 | 18% | 36 |
| Menya | 80,808 | 193,200 | 21% | 32 |
| Quena | 62,688 | 160,300 | 20% | 37 |
| Beni-Suef | 46,416 | 104,200 | 22% | 33 |
| Alexandria | 10,800 | 218,000 | 2.5% | 70 |
| Damietta | 19,200 | 52,400 | 18% | 56 |

| Governorate | A. Estimated No. of Recipients 1/ (mothers + children) | B. Estimated Population Aged 3-36 months 2/ | C. Child Recipient as % Child Population | D. Physical Quality Of Life Index 4/ |
|---|---|---|---|---|
| Kafr El Sheikh | 48,816 | 131,900 | 19% | 42 |
| Gharbeya | 21,288 | 115,600 | 9% | 44 |
| Beheira | 69,048 | 139,200 | 25% | 42 |
| Cairo (North, South, East, Mid, Helioplis and Helwan) | 36,000 | 477,900 | 3.8% | 64 |
| TOTAL | 980,832 | 3,593,400 | 13.6% | |

Footnotes:

1/ Quantity of food allocated ÷ ration size.

2/ (1976 census governorate population) X (.038 crude birth rate) X (.9 infant survival rate) X (33 months ÷ 12 month/yr) = about .94 times governorate population.

3/ (Column A X 1/2) ÷ (Column B) X 100%.

4/ J.O. Fields and George Ropes, "Development in the Egyptian Governorates: A Modified Physical Quality of Life Index, January, 1979, MIT, forthcoming in L'Egypte Contemporaine."

* Target children are 6 to 36 months old (not 3 to 36); there the numbers in column overestimate the size of target group population by about 9%.

of children aged 6-36 months are estimated to have some degree of malnutrition with 13.1% having moderate to severe (2nd and 3rd degree) malnutrition. The MCH feeding program would be able to cover 100% of the moderate and severly malnourished children or 28% of all malnourished 6-36 month old children.

A different prespective on potential coverage is based on the size of the population accessible to clinics (the program's delivery system). While physical access to clinics is impressive (2400 clinics distributed nationally, with the catchment area for a typical rural health unit being 15 sq.kms) 19/ clinic utilization is a low 20-25%. Assuming this percentage applies across age groups (which probably underestimates MCH coverage), the program can reach 60% of the total target group attending MOH facilities. Given the prevailing low prestige of MOH services plus evidence such as the higher malnutrition levels found among clinic attenders in the MIT study compared to that in the population-based sample in the CDC study, it is probable that there is considerable overlap between the MOH clinic population, which equals 25% of the total 6-36 month population and the 53.7% of children 6-36 months old who are malnourished. From either perspective, the current program size is substantially less than the estimated target group size.

J. Consumption Effects of the Ration

The issue here is what additional nutrients are actually available to the child (whether directly through the supplement or through feeding behavior changes due to nutrition education) after accounting for the effects of substitution and intra-family sharing of the food.

The distribution system of double rations per family implicitly recognizes the dilution of benefits within the family. Oil specifically is recognized as being shared among family members. (Its relatively high economic value and general utility and acceptability enhance its value as an incentive rather than a direct contribution to improved child consumption.) However, any addition to total family food supply should benefit the child's consumption. The type of food (ICSM, but not oil) may favor the child's receiving a disproproportionate share of the supplement.

Nutrition education oriented toward specific behaviorial changes in child feeding may enhance direct use of the supplement in child feeding or alternatively lead to other positive changes in the child's consumption patterns.*

The bimonthly mode of distribution probably detracts from the effectiveness of the supplement for child feeding. Informally collected evidence suggests the ration is used up within days (oil) or certainly within the first month (flour)

*Current nutrition education classes do include instruction both on the preparation of ICSM and the use of oil in child feeding. Data are not available on how effective this teaching has been.

so that regular direct impact on consumption is largely obviated. Furthermore, if the food is the incentive for clinic use and/or attendance at nutrition education classes then a "once every two months" delivery also dilutes these potential additional/ alternative means for impact on consumption. (The origins of the bimonthly pattern of distribution are related to program efficiency rather than impact; therefore effects on the former must be analyzed and offset against the possibility for improved impact.)

K. Incentive Value of the Ration

The food may serve as a general incentive for clinic attendance and/or participation in nutrition education classes. However, the linkages between food distribution and nutrition education at both the nutritional and clinic level are not adequate, significantly detracting from the potential effectiveness of both programs.

Use of food as an incentive for clinic use implies that the latter has a positive effect on nutrition and health status. Clinic services are not yet developed such that this assumption is a comfortable one. However, clinics do appear to be a vehicle for reaching target beneficiaries (see comments under Issue C) and food itself is veiwed as a resource to catalyze more general improvement in MCH services.

Use of food as a programmatic catalyst is more important for its potential than accomplishments visible to date. The potential, while recognized by the program's director has not been systematically incorporated in the program's design.

If the food does act as an incentive, it is because beneficiaries recognize its nutritional (or therapeutic) value or economic value. Empirical observations, especially given the current distribution mode based on mass gatherings on distribution days, suggest that the latter is more likely the case.

There is no local equivalent to ICSM so only approximations of its economic value to the family can be hazarded. Nutritionally the closest resemblance may be to milk at 50 pt. per liquid kilo, however in terms of use, ICSM is closer to balady flour at 12 pt/kilo. A limited ration of oil can be purchased (theoretically) by families at 10 pt/kilo, and a second ration is available at 30 piasters. A more realistic price is probably the non rationed corn oil available at government stores for .55 piasters per kilo.*

Given these caveats, the range of approximate values of the MCH monthly family ration can be estimated as follows:

| | Milk as Equivalent (piasters) | Flour as Equivalent (piasters) |
|---|---|---|
| 2.84 k ICMS | 710.00 | 34.1 |
| .874 k soy oil | 48.1 | 48.1 |
| Total Value | 758.1 = LE7.6 | 82.2 = LE.8 |

*Since the food sibsidies only effectively reach urban families, these values do not reflect (probably under estimate) the value to rural families.

Absolute values are more useful in a context related to income and food expenditures. Data from the 1974-5 Household Expenditure Study indicate that the poorest 27% of households have a total income under LE 778 per year and spend over 60% of that income on food. The value of the monthly ration, therefore, ranges from 2-20% of monthly food expenditures.[20/]

L. Regularity of Supplies at Clinic Level:

Empirical evidence collected in a very few site visits revealed some persisting problems with regular delivery, for example in one clinic, both allotments #1 and #2 (4 months of food) for calendar 1981 arrived and were distributed in March.

Major changes in commodity type, beneficiary selection and mode of distribution are relatively recent and have understandably caused some disruption in logistical systems. Such disruption is presumably short term while the changes themselves are directed at long term improvement of program logistics. Program personnel from the clinics as well as national level attest that improvement is already visible. The MCH Director, for example, provided anecdotal "evidence" based on his communications from field personnel which had changed from the previous pleas to avoid the burdens of food distribution to requests for increased allotments.

As in other aspects of the program, the fairest measure of achievement would be a dynamic indicator rather than a summary of shortcomings vs. compliance to date. Regular and

timely availability of food at all 2400 clinics is still not a reality. However, the comparative performance over the recent past indicates a trend toward improvement. Certainly, the recent program changes and CRS's in-house effort to revise and streamline its information management system are positive indications. Also, the recent AID Audit Report did not identify major distribution bottlenecks in the MCH program.

On the other hand, where irregularities occur (due to storage or transport problems within certain governorates, etc.) the implications are significant because they can obviate potential for achievements at the purpose and goal level.

## M. Conformity with Program Norms at the Clinic Level

Two of the four attributes of supplementary feeding programs termed essential by Burkhardt et al in their report ("Supplementary Feeding in Rural Egypt") for the Cairo University/MIT Health Care Delivery Systems Project[17/] namely growth monitoring and appropriate nutrition education, have already been discussed as continuing design deficiencies in the MCH program. The other two attributes, targetting to the vulnerable 6-36 month age group, and an adequate period of participation (i.e. at least one-year), are incorporated in the MCH program design. They are each discussed here in terms of how well they seem to be put into practice at the clinic level. Performance of clinics in terms of other program norms is also reviewed.

As a preface to this discussion, however it seems appropriate to raise what is perhaps the major issue affecting program performance at the clinic level. It appears that the situation as described by Burkhardt et al in their report on the MCH program (cited above) is probably still accurate: that doctors generally do not adequately recognize or use the food as a prescription for malnourished children and that adequate operation of the program is primarily a function of the interest and motivation of the doctor-in-charge. Thus well-designed program norms and an efficient logistics systems will result in an effective program only if the important issues of personnel training and motivation are also addressed.

1. Beneficiary Selection Criteria:

The lack of scales, weight charts and personnel training means that for all practical purposes children are not currently selected by the weight for age criteria specified in the MOH's program design. Some clinics attempt to comply with the "spirit" if not the "letter" of criteria, through applying criteria such as: clinical diagnosis of malnutrition; weighing of children under age one on infant scales; weighing of older children with mothers on bathroom scales; restriction of beneficiaries to children between 6-12 months (given limitation of 300 child beneficiaries), preference to families with twins in the target age group.

In other cases, selection is based on more subjective assessment of relative need (poverty) together with a common practice (reported by clinics visited on field trips) of selecting all 300 families at once in January with additions throughout the year based on the very few program drop outs.

A common complaint among Governorates and clinic staff was insufficient rations although the reality of the "need" is difficult to assess in the absence of evidence that selection criteria are accepted and applied.

CRS and MOH report flexibility regarding the 300 beneficiary/clinic limit to allow inclusion of additional eligible participants throughout the year and in excess of 300. However, other limitations e.g., absorptive capacity of an urban MCH center, program ceilings at governorate and national level obviously affect how easily this flexibility can be exercised.

2. Regularity and Duration of Program Participation

The clinics visited seemed to follow guidelines that participants remain one full year in the program. They are not likely to stay longer regardless of nutrition status, it was said, since there are many more needy and eligible families. The view of the program as a handout for the needy rather than a preventive or therapeutic health measure (impossible to estimate how widespread given limited site visits, etc.) does persist however as was evident in comments at an MOH meeting with

governorate officials where some insisted that because of the disparity between need and program size that bimonthly distribution did not go to the same beneficiaries for a full year, i.e. some participants were dropped (or dropped out) before completing a full year in the program.

3. Storage and Transportation: Given the current distribution mode, clinic level storage is probably adequate although transportation may still represent a bottleneck to regular delivery to clinics in some governorates. However, the system could not easily absorb a sudden switch to monthly distribution (even if this were judged as important to increasing frequency of beneficiaries' contact with the clinics. Also, if some changeover to pre-packaged commodities were instituted (i.e. NFDM) with the intention of distributing food individually (e.g. on a prescriptive rather than en masse basis) the implications for storage and transportation need to be factored in the decision so that regularity of supplies is enhanced, not reduced.

4. Diversion: The only evidence available suggests that some WSB was sold, fed to chickens,*wasted, etc. due to poor acceptability testing of ICSM at least at an institutional level by the Nutrition Institute), indicate this is less a problem for current commodity, ICSM.

*The cost of chicken feed, as opposed to food for human consumption, is not subsidized or controlled. It is reportedly cheaper to feed chickens bread (or of course, donated WSB).

5. Use of Containers: These are sold at nominal cost to participants in accord with the new delivery system, i.e. 2 tins and one bag to each group of 4 mothers. For a clinic with 300 beneficiaries, the amount collected amounts to LE 8.4 per distribution (with 6 distributions per year, the total would be just over LE 50. Records checked at the clinics visited indicated conformity with the regulation that the money is collected and passed to the Governorate level (30% going to the CRS account with IMC and 70% retained for use by the governorate to defer program costs, provide small staff incentives, etc.).

The amount of funds involved is small, and there is no evidence of misuse.

N. Beneficiaries' Preferences and Use of Commodities:

Based on visits to only 4 clinics and a quick review of recent end-use evaluations, ICSM appears to have much better acceptability than WSB. Mothers questioned, as to preference, said they would prefer to receive a known commodity, whether one that is more highly valued (NFDM) or simply more versatile, e.g. "balady" flour. Oil is appreciated, used up fairly quickly and for general family use.

Since most mothers were new to the program in January, it was difficult to assess their use of ICSM. Where nutrition education, i.e. food demonstrations are provided at the clinic, ICSM was recognized by the mothers questioned as an appropriate food for young children. On the other hand, end use evaluators

have reported that some clinics have not yet received or passed on to mothers any information on the use or preparation of ICSM (program manuals, revised to incorporate recent revisions have only recently been available; these include information, receipts etc. on ICSM).

Supramine 21/ and fresh milk are available and distributed sporadically at some clinics, on an undefined but generally prescriptive basis. The quantities are not significant so they do not disrupt or duplicate the distribution of PL 480 commodities.

The small sample of mothers interviewed indicated good acceptance of Supramine (and, of course, the fresh milk) and expressed particular satisfaction with the package size as hygienic, convenient, etc. Conversations with mothers added to other evidence that breast feeding duration was generally more than adequate while introduction of other foods was fairly late and generally inadequate.

## VI. Annex: Logical Framework for Nutrition Education Project

LOGICAL FRAMEWORK

**Project Title :** Nutrition Education in Health Centers

Life of Project : 1 year
From FY' 77 - FY' 78
Total USAID Funding: LE 218,075
In US Dollars: $ 396,504

**N.B.** Dollar Rate Calculated at Section 204
Exchange Rate of $ 1.00 = LE 0.55 or LE 1.00 = $ 1.8182

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|---|---|---|---|
| Programme Sector Goal: The broader objectives to which this project contributes (A-1) | Measures of Goal Achievement (A-2) | (A-3) | Assumptions for achieving Goal Targets (A-4) |
| To assist in the Government's efforts to improve the nutritional status of pre-school children. | Satisfactory growth rate of children | Health Center records. Children's age-weight charts monitored over a period of 18 months following inception of training courses at Health Center level. | That there be no increase of endemic and epidemic diseases. That there be no decrease in family living standards or economic circumstances. That the MOH sustains its interest in the project. That there are no natural or man-made catastrophes sufficient enough to divert the project. |

LOGICAL FRAMEWORK

Project Title: Nutrition Education in Health Centers

Life of Project: 1 year
From FY' 77 - FY' 78
Total USAID Funding: LE 213,000
In US $ Dollars : $ 306,504

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|---|---|---|---|
| Project Purpose (B-1) | Conditions that will indicate Purpose has been Achieved: End of project status (B-2) | (B-3) | Assumptions for Achieving Purpose (B-4) |
| To introduce a basic nutrition education program into 150 Health Centers and to establish the organizational framework to ensure that nutrition education eventually will form a regular part of the MCH service throughout Egypt. | 1. An organized nutrition education program initiated at 150 Health Centers by specially trained staff; | 1. Records kept by Nutrition Organizers Public Health Depts. and individual Health Centers. | 1. That in individual Governorates the Health Dept. Staff provide sufficient priority and extend full cooperation.<br>That PL 480 commodities will be provided in conjunction with the MCH and nutrition education project for the duration of the project |
| | 2. 25 Nutrition Organizers trained and operating in their respective areas. | 2. Records kept by CRS Regional Nutritionists.<br>Records kept by CRS and the Public Health Depts. of the respective Governorates | 2. That all 25 Nutrition Organizers, once trained remain in their assigned post and are not lost from the program through reassignment, resignation or for other reasons. |

PROJECT DESIGN SUMMARY

LOGICAL FRAMEWORK

Project Title: Nutrition Education in Health Centers

Life of Project: 1 Year
From FY' 77 - FY' 78
Total USAID Funding: LE 218,075
In US Dollars : $ 396,504

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|---|---|---|---|
| Project Outputs(C-1) | Magnitude of Outputs(C-2) | (C-3) | Assumptions for Acheiving Outputs (C-4) |
| 1. One training course for Nutrition Organizers; | 1. 25 Nutrition Organizers trained and five Regional Nutritionists trained; | 1.Records kept by CRS and by the Ministry of Health; | 1. That the MOH selects and assignes 25 suitable qualified and motivated persons as Nutrition Organizers;<br>That GOE Higher Institute of training extend full cooperation. |
| 2. Six training sessions for Health Center personnel; | 2. 150 Health Center personnel trained; | 2.Records kept by CRS and Public Health Depts. in the respective Governorates; | 2. That suitable training centers and facilities in the field can be secured; |
| 3. Mothers' classes started at Health Centers. | 3. a)150 classes started (one per center), each one for approx. 30 mothers receiving PL 480 foods through GOE MCH services;<br>b)150 Health Centers equipped and supplied for demonstrations. | 3.Records kept by the Health Centers.<br>Records kept by Nutrition Organizers and CRS Regional Nutritionists. | 3. That no prolonged delays in program implementation will occur.<br>That those trained will return to their original centers and remain for a period of time sufficient to start, conduct and follow-up classes for mothers. |

PROJECT DESCRIPTION SUMMARY

LOGICAL FRAMEWORK

Project Title: Nutrition Education in Health Centers

Life of Project: 1 Year
From FY' 77 - FY' 78
Total USAID Funding: LE 218,075
In US $ Dollars : $ 396,504

| Narrative Summary | Objectively Verifiable Indicators | | | Means of Verification | Important Assumptions |
|---|---|---|---|---|---|
| Project Inputs (D-1) | Implementation Target (D-2) | Man - Months | LE | (D-3) | Assumptions for Providing Inputs (D-4) |
| A. USAID Grant | | | | | |
| 1. Personnel | 1.a) Salaries + per diem allowances | | | | |
| | Five Regional Nutritionists | 60 | 12,000 | A. Accounts kept by CRS, MOH, and Governorates' Health Depts. | A. That section 204 or other AID funds will become available for this Nutrition Education Project without much delay. |
| | Five " Secretaries | 30 | 1,500 | | |
| | Five " Drivers | 30 | | | |
| | b) Bonus + per diem allowances twenty-five Nutrition Organizers | 300 | 6,000 | | |
| 2. Training | 2.a) Four month intensive course 30 trainees x 4 months | 120 | 10,750 | | |
| | b) Training of MCH Staff 25 persons x 6 courses Or total 150 persons trained | 75 | 8,400 | | |
| 3. Commodities | 3.a) Expendable | | 9,250 | | |
| | b) Non-Expendable | | | | |
| | Equipment 5 Reg.Offices | | 7,500 | | |
| | Equipment 150 Centers | | 17,250 | | |
| | 30 vehicles | | 120,000 | | |
| 4. Other Costs | 4. Public transport and Running costs 5 vehicles for 6 months | | 3,100 | | |
| | Total | | 198,250 | | |
| | Plus 10% contingencies | | 19,825 | | |
| | Grand total USAID grant | | 218,075 | | |

| Narrative Summary | Objectively Verifiable Indicators | Means of Verification | Important Assumptions |
|---|---|---|---|
| B. Government of Egypt Contribution | | | |
| 1. Personnel | 1. Salaries/housing allowances<br>25 Nutrition Organizers 300<br>25 Secretaries 150<br>25 Drivers 150<br>Additional Staff if required | B. Accounts kept by CRS, MOH, and Governorates' Health Departments. | B. That the GOE will be able to support the Project as agreed upon. |
| 2. Training Facilities | 2. a) Institute for 4 month course<br>b) Six field training centres | | |
| 3. Office Space and Services | 3. 25 Offices for Nutrition Organizers<br>5 Offices for Regional Nutritionists | | |
| 4. Supportive Assistance | 4. Staff and facilities MOH and GOE Higher Institutes of learning | | |
| 5. Other costs | 5. Running costs 25 vehicles for 6 months | | |
| | 45,000 | | |
| | Sub-total | | |

| Narrative Summary | Objectively Verifiable Indicators | Man-Months | Means of Verification | Important Assumptions |
|---|---|---|---|---|
| C. CRS Contribution | | | C. Accounts kept by CRS | C. That CRS will continue to operate in Egypt |
| 1. Personnel | 1. Salaries and per diem allowances | | | |
| | 1 Project Manager | 12 | | |
| | 1 Secretary | 12 | | |
| | 1 Driver | 12 | | |
| 2. Commodities | 2. a) Project Office, equipment and supplies | | | |
| | b) One vehicle | | | |
| 3. Supportive Assistance | 3. a) Administrative accounting and supportive assistance | | | |
| | b) Consultant services | | | |
| 4. Other costs | 4. Running costs one vehicle for 12 months | | | |
| | CRS Total | 30,000 | | |

IMPLEMENTATION PLAN

| Event | Description | date | Responsible Agent |
|---|---|---|---|
| 1 | Signed Transfer Agreement received in Mission and CRS appoints project manager | Day 1, Month 1 | CRS |
| 2 | Recruit and appoint 5 regional Nutritionists, drivers and secretaries | Day 2, Month 1 through Day 1, Month 4 | CRS |
| 3 | Procure office equipment & supplies for above | | CRS |
| 4 | Order 30 vehicles - 5 for regional nutritionists, 25 for nutrition organizers | | CRS |
| 5 | Appoint project manager/officer responsible | | MOH |
| 6 | Select & appoint 25 Nutrition Organizers | | MOH |
| 7 | Develop educational material for training at all levels (nutrition organizers, health center staff, mothers) | | CRS & MOH |
| 8 | Conduct 3-month classroom training for nutrition organizers and one month field training. | Day 2, Month 4 through Day 1, Month 8 | CRS/MOH |
| 9 | All vehicles on hand | | |
| 10 | Evaluate Training course - use evaluation in designing | Day 2, Month 8 through Day 1, Month 9 | CRS/MOH |
| 11 | Develop and set up 6 courses for Health Center personnel, one from each of 150 centers (3-5 Nutrition Organizers to conduct each course). | | MOH-Nutrition Organizers |
| 12. | Nutrition Organizers conduct courses for Health Center Staffs (15 days) | Day 2, Month 9 through day 16, Month 9 | MOH |

| Event | Description | Date | Responsible Agent |
|---|---|---|---|
| 13 | Evaluate courses - use evaluation in designing phase 2. | Day 17, Month 8 through Day 16, Month 10 | CRS-MOH |
| 14 | Organize and develop training courses for mothers. | | MOH-Health Center Staff |
| 15 | Conduct 20 weekly nutrition sessions for mothers. | Day 17, Month 10 through Day 3, Month 15 | |
| 16 | Evaluate courses - use evaluation in designing phase 2. | Day 4, Month 15 through Day 3, Month 16 | CRS-MOH |
| 17 | Independent evaluation/design team - Assistance in designing phase 2. | Day 5, Month 16 through Month 17. | |

## FOOTNOTES

1. "Pilot MCH Scheme, Beheira Governorate" is a document describing the pilot activity in 1974; CRS/Egypt has a copy in its files.
2. See, for example, the 1980 Agreement between CRS and MOH; the 1980 ABS Program Plan by CRS and the MOH Manual for Clinic Workers on the MOH program.
3. MOH "Booklet for Workers", published and distributed in 1979 specified these and other norms for program operations. A new "Booklet" was prepared this year incorporating changes in ration size, etc. but retaining these basic selection criteria. A translation of the 1979 Booklet is available; the new one has not yet been translated.
4. The Alexandria Survey Bureau has been contracted to independently survey and report on condition of the commodities upon arrival.
5. Burkhardt, Field and Ropes in "Supplementary Feeding in Rural Egypt: A Summary Profile of the Health System in Action." Monograph #5, University of Cairo/MIT Health Care Project makes this point more eloquently (p. 28): "Egypt has taken on the burden of making large what is usually small, of making national what is usually local and of making bureaucratic what is usually philanthropic. It is a tall order; and if one is tempted to bemoan the slippage that occurs in translation, one must applaud the effort nonetheless."

6. A translated copy of the "Agreement Between the Ministry of Health, ARE and CRS Providing for the Conduct of a Project under Section 204, Title II, P.L. 480" is included among the documents submitted to AID/W with this report.
7. CRS "Proposal for Section 204 Funding" submitted to USAID/Cairo in 1977.
8. A copy of the booklet, in Arabic, was provided to AID/W along with other materials related to the nutrition education component of the MCH program.
9. "Arab Republic of Egypt National Nutrition Survey," 1978 published by the Office of Nutrition, Development Support Bureau, AID, Washington, D.C.

   The follow up Nutrition Status Survey in 1980 reflects a similar concentration. (See report dated 3/13/81 from the Office of Nutrition, AID/Washington). The percentage of 12-23 month old children in Gomez II and III are 26% and 36% for universes 1 and 5,while for the total under age six population the percentages are 11% and 19% respectively.
10. Figures are from "Strengthening of Health Services for Rural Egypt"by Mobarak, Nagaty, Hammamy and Kielmann. The 64 per thousand mortality rate for 1-2 year olds was quoted by CRS in its proposal for Section 204 funding of its Nutrition Education project.

11. 3122 calories and 86.7g protein per day per person according to Food Balance Sheets prepared for Egypt by FAO for 1972-4.
12. From "SocioEconomic Characteristics Affecting Growth in Pre-School Children, Infant Feeding Practices and Certain Nutrition Signs," by Dr. Amin Kamel Said, Nutrition Institute in Workshop on Nutrition and Health in Egypt, Cairo, October 20-22, 1979.
13. FAO/WHO Standard for Nutritional Needs of 1-3 year old child is 1360 calories and 16g protein per day.
14. Health in Egypt: Recommendations for U.S. Assistance. Report of a study by a committee of the Institute of Medicine Division of International Health, National Academy of Sciences, January, 1979, p. 42.
15. A.B. Mobarak et al, "Diarrhea Disease Control Study" Final Report on Phase I. S.R.H.D. Project, Ministry of Health, ARE., April, 1981. p.2.
16. See "Childhood Malnutrition in Rural Egypt: Results of the Ministry of Health's 'Weighing Exercise'". MIT-Cairo Health Care Delivery Systems Project: Monograph #4, M. el Lozy et al. June, 1980.
17. op cit., Burkhardt, Field and Ropes Monograph #5, Cairo University/MIT Series.
18. From CRS plan "Evaluation of the Nutrition Education Project" submitted with the Second Progress Report on the Section 204 Nutrition Education Project, January, 1980.

19. From Cairo University/MIT Health Care Delivery Systems Project: Mongraph #2: "The Influence of the Health System on the Recorded Incidence of Infant Mortality and Birth Rates in Rural Egypt." by J. Field and G. Ropes.
20. For an analysis using the Household Expenditure Study data to explore the relationship among income, food expenditures and food subsidies in Egypt, see Annex XIII of AID's Country Development Strategy Statement: "Egypt's Food and Energy Subsidies."
21. Supramine is a blended food for young children developed and produced with support from UNICEF. Production is currently 10,000 MT per year with little prospect that it will expand significantly. The MOH is the major purchaser of the Supramine production; but supplies in clinics are irregular. See UN reports on Supramine available in Food for Peace Office, USAID/Cairo.

# CHAPTER FOUR: MINISTRY OF SOCIAL AFFAIRS - CRS OTHER CHILD FEEDING

## I. Program History and Description

### A. Background and Overview

CRS in collaboration with the Ministry of Social Affairs (MSA) provides commodities for "Other Child Feeding" to 940 public and private sector institutions throughout Egypt. The program began in 1976, under a special agreement between CRS and CARITAS of Egypt and was subsequently expanded to include public as well as private sector institutions. In FY 81, the program provides some $1.5 million in commodity support for 45,000 children. The following represents the monthly ration per beneficiary:

| | |
|---|---|
| ICSM | 2 kilos |
| Flour | 3 kilos |
| Bulgur | 1 kilo |
| Veg. Oil | .45 kilos |

The OCF program operates under a formal agreement with the Ministry of Social Affairs in 1977 and covering a five year period. Formal agreements also exist between CRS and CARITAS and the Coptic Ecumenical Service Organization under whose auspices food is provided to institutions affiliated with them. Annual agreements between CRS/IMC/MSA outline each agency's specific commitments including commodity, monetary and in-kind

inputs for each year. Intended to serve institutions such as day care centers, orphanages, etc., the program was initiated and is still concentrated in major urban areas, primarily greater Cairo and Alexandria where such institutions are concentrated. However, as these institutions are becoming more common in smaller cities and villages, the program does serve a number of these as well.

B. Objective

The objective of the OCF Program operated through CRS in Egypt coincides with that stated in Handbook 9 for Other Child Feeding: "to reach undernourished children who are neither attending schools nor being reached through Mother Child Health (MCH) Feeding projects . . .with priority attention . . . to projects targetted to reach the younger child".

C. Logistics

CRS is responsible for obtaining the programmed commodities from the U.S. (delivered to the port of Alexandria) and oversees commodity movements within Egypt as well "end use" at the institution.

The Ministry of Social Affairs sets program norms, approves allotments by Governorate and approves applications for participating institutions. The Ministry also supervises the institutions directly under its jurisdiction. CARITAS and the Coptic Organization supervise the program in institutions under

their respective jurisdictions.

As in other PL 480 Title II programs, IMC is responsible for receiving the commodities upon arrival in Alexandria, warehousing in Alexandria or other regional IMC facility and delivery to the MSA Zone in each Governorate according to the allocation plan. At the Governorate level, the MSA Zone delivers commodities to the centers where they are used for on-site daily feeding of recipient children in the institutions. Deliveries are made to centers in 6 month allotments, (i.e. twice yearly). The number of recipients per center is determined according to demonstrated need and are provided in full bag (or box) lots to facilitate delivery.

At the centers (institutions) the food is used in preparing the daily meal(s) served "on site" to beneficiary children. Title II commodities provide only part of the food used for child feeding within these institutions. Additional food is purchased by the institution from its own budget. About 25,000 of the total beneficiary level is allocated for public and private institutions directly supervised by MSA. The breakdown between public and private institutional recipients is estimated as 50-50.

MSA provides 100% budgetary support for public institutions as well as partial budget support to many of the private institutions. The latter also depend on other donations or private institutional support (such as in the case of those under CARITAS or Coptic auspices.)

Approximately one-half of the institutions are residential, providing for the total daily food consumption of their children. The non-residential institutions provide one or two meals to the children, in their care.

For day care and similar institutions, the children's families cover at least some of the cost of the institutions' services. MSA estimates the range of costs for the families as 10-200 piasters per month. Actual program costs are estimated at 30 p/day/child.

D. Participation Criteria

The program follows general FFP guidelines for determining institutional eligibility:

a. Preschool Child Feeding: Children under the age of 6 attending day nurseries, day care centers, day kindergarten or similar facilities where food is provided 25 days a month.

b. Other Child Feeding: Institutionalized children 14 years and under attending childrens' hospitals, boarding schools, orphanges, and summer camps where food is provided 30 days per month.

c. Other Child Feeding: Non-institutionalized children 6 through 14 years old receiving food 25 days a month at daily organized child feeding facilities.

As a whole, the program serves a greater number of 6-14 year old children than those under 6; an exact breakdown of beneficiaries by age was not available.

Eligible institutions must also meet additional criteria before being admitted to the program:

1. Demonstration of need - i.e. that they are serving undernourished or needy children not reached by other MCH or school feeding programs.

1. Proof of adequate facilities for storage, preparation and feeding of food commodities.

CRS evaluators visit about 20% of these institutions per year to verify continued compliance with these criteria and monitor "end use" of the commodities within the institution.

## II. Logical Framework

### A. Problem

There are a number of Egyptian children who depend on institutional care, for their basic needs including daily meals. Because of their situation, these children are not reached by other major GOE-sponsored food support programs, principally school and MCH feeding.

Institutions which serve such children include both public and private orphanages, camps, kindergardens, day care centers, children's hospitals and boarding schools. These institutions' access to sufficient, good quality foods to meet the needs of children in their care are limited by institutional budgetary constraints and the fact that the children's families are not in a position to pay the full cost for services, including food provided.

B. Goal

The program is intended to contribute to the economic and nutritional well-being of needy, undernourished children in institutions. Institutionalized children are among the neediest in Egypt but are not reached by other major feeding programs in school and MCH clinics.

C. Purpose

The program purpose is to provide 45,000 children, dependent on institutional care and feeding, with a daily food supplement. The food is intended to be prepared and fed to the children "on site". The daily ration per child represents 868 calories and 27.5 g. protein.

D. Outputs

1. 3483 MT of PL 480 commodities delivered to 920 public and private institutions throughout Egypt in 1982.

2. Daily meals prepared for the 45,000 children served by these institutions.

E. Inputs

Major inputs to the program are the following:

1. PL 480 commodities valued at $1,453,000 for FY 82 are provided through CRS.

2. Budget support from MSA valued at approximately $215,000 to cover internal transport and warehousing costs (through an agreement with the IMC) as well as its administrative costs.

3. Supervisory and administrative support from CRS, at national and governorate level and the private voluntary agency, CARITAS.

4. Cost of all non- PL 480 commodities provided by the institutions.

F. Indicators and Means of Verification

a. Goal Level

The principal measure of goal achievement is the extent to which the participating institutions do reach and benefit the intended target children. Children within participating institutions are served equally; i.e. the selection criteria is applied at the institutional level with the burden on the institution to demonstrate that it does reach needy children (and it has the capability and facilities to provide adequate food preparation and feeding). Demonstrating compliance with the first criterion, i.e. that the institution is serving needy children, is self-evident for institutions such as orphanages but more complex for day care centers, kindergardens, etc. For the latter, application of eligibility criteria based on the family's socio-economic status would be the most logical means to routinely demonstrate compliance. Alternatively profile data on families of child beneficiaries could be collected and processed either as part of a routine inscription procedure or through a special study.

Demonstration of benefit to the children served is also self-evident in cases such as an orphanage but more problematic for other institutions. For example, the services provided by a day care center, including the food, are substantially subsidized (by GOE or a private donor) so that the actual value minus the cost borne by the family represents an income transfer to the family. Another way of looking at benefit would be to monitor nutritional status of participating children through weight for data, for example. Such data should however be complemented by some information on consumption patterns at home before and after enrollment to estimate whether food provided at the institution is a substitute or addition to that normally provided.

b. Purpose Level

Evidence of purpose achievement would be the daily meal preparation and "on site" feeding within the institutions. Program records at the Center as well as routine end use evaluation visits can verify compliance with the project's purpose. The meals served to children can be analyzed to verify their actual nutritional value relative to the value of the commodities provided. Plate waste can be measured to identify the true portion of food actually consumed by the child.

c. Output Level

Information regarding actual quantities distributed, the number of participating institutions the regularity of

delivery, etc. measure outcome achievement. Program records available at the national (MSA, IMC, CRS), Governorate and institutional level can be used to verify compliance with distribution and use of commodities.

G. Major Assumptions

1. Need, Under-nutrition among institutionalized Children

Selection criteria for institutions are based on demonstrating that the children served are "needy" at least in a socio-economic sense. Institutions directed at children from other socio-economic classes are excluded from the program. Data are not available to verify the nutritional vulnerability of children in institutions. It undoubtedly varies, but mal-nutrition is closely linked to poverty as well as socio-cultural deprivation which is often characteristic of institutionalized children. Only routine collection of data on participants or a special study as indicated in the section on indicators would allow a meaningful assessment of how well-oriented this program is.

2. Food provided represents a supplement to child's diet

This issue arises for non-resident children who spend only a portion of each day in the institution. Families often depend totally on such institutions for the child's consumption, reducing or eliminating meals previously supplied at home. This could be checked through comparing the child's consumption at home before and after enrollment in the program.

The important point is that the total diet of the program children be equal or superior to the previous total diet. Institutions, recognizing this issue, often attempt to provide 100% of daily requirements. However, problems such as limited food budgets, limited bulk intake per meal of small children and the logistical problems of serving smaller, more frequent meals are often prohibitive. The ration provided under this program does represent a potentially important portion of daily requirements: 868 calories and 27.5g. protein. In cases where substantial substitution occurs, (i.e. decline in at-home consumption) the feeding of the child would more properly be viewed as a family income transfer.

## III. ISSUES

### A. Program Size

In its initial request to CRS, the MSA requested a beneficiary level of 40-50,000 to cover those institutions it directly supervises. MSA characterizes the current program as covering less than half the need - i.e. 940 of approximately 3,000 insittutions and 40,000 of some 100, 000 potential child beneficiaries. More information about the institutions, their capabilities and needs and the type of children served would be needed to adequately assess how large the program should be or could be (given constraints).

B. Commodity Amount and Type

While representing a significant potential contribution in terms of per capita provision of nutrients (868 calories and 27.5 g protein per child per day), the economic value of the program is viewed by many of the participants as considerably less. MSA estimates that PL 480 commodities provide for about 15% of the total daily food costs. Given that logistical costs borne by GOE would be relatively stable, the preference is for higher value commodities. Oil is especially appreciated while bulgur is disparaged. The acceptability of ICSM is still unknown as its use is relatively recent.

The low value-placed on certain commodities may well account for the losses and waste reported in this program. The AID PL 480 officer cited this as a problem area; however, the issue was not explored as part of this review and its relative importance is unknown.

A reconsideration of both the type and amount of commodities (especially for example if ICSM is directed primarily to 6-14 years old rather than preschoolers) might yield some cost savings as well as a more acceptable commodity mix.*

C. Twice Yearly Deliveries

The advantages of bulk deliveries limited to two per year are obvious for program logistical management. However, the requirements, in size and condition, for applicant institutions are correspondingly much more stringent (or food is ruined, diverted, etc.). The "poorest of the poor" institutions, which

*Changes proposed by CRS in their AERs may represent a step in this direction.

are most likely to reach a similar clientele, may be thus ineligible. This possibility is to some extent alleviated by assistance from sponsoring agencies to upgrade storage areas as well as other facilities required for program participation.

D. Substituting Other Inputs for Food

This issue was pursued only in a very preliminary way and was brought up initially by the MSA program manager. His point was that given the general availability of low cost food in Egypt, that food purchases were not the greatest drain on the limited budget of institutions served by the program. Obviously, providing donated commodities frees up money for other uses but there may be other commodities -e.g. educational supplies, etc. which might have greater effect given that MSA must provide budget and administrative support to transport and store relatively low-value food commodities.

No recommendation can be made as to what specific substitute support might be considered. The issue is raised for further exploration as warranted by the concern to substitute PL 480 Title support for other inputs.

# CHAPTER FIVE: EGYPTIAN FAMILY PLANNING ASSOCIATION - CARE FAMILY PLANNING

## I. BACKGROUND

### A. Population Growth

Egypt's population of 44 million (spring 1981 estimate) has increased at about 2.3% per annum since the mid 1960's and appears to be increasing more rapidly at present.[1] An estimated 96% of this population lives on only 4% of the land; the population density in this area is more than that of the Netherlands, the most densely settled country in Europe. Thus rapid population growth is putting increasing pressure on the limited amount of arable land and infrastructure.

### B. Government Policy:

The Government of Egypt (GOE) first expressed explicit concern for increasing population pressure in 1962 and first budgeted support for clinical services in 1965. In that year the Supreme Council of Family Planning was established and made responsible for population policy. The Executive Board of the Supreme Council had responsibility for direct administration of family planning until late 1977 when it was transferred to the Ministry of Health.

At present, the GOE has an explicit population policy with specific targets of reduced fertility and population growth. A flexible layered approach has been adopted and labeled the "family planning redundancy system"[2]. The Ministry of Health (MOH) has primary responsibility for family planning through its system of over 3,000 health facilities in urban and rural areas. The State Information Services (SIS) "Awareness Campaign" has generated interest in Egypt's population situation. The Population Development Program (PDP) operates through local councils and officials with one

of its aims the promotion of family planning and the status of women. Private health practitioners and voluntary agencies such as the Egyptian Family Planning Association (EFPA) also provide family planning services.

C. Fertility and Family Planning Patterns in Egypt:

As the table below indicates; outside of the urban governorates of Cairo, Alexandria, Ismailia, Suez and Port Said; urban fertility rates among 45 to 49 year old women were surprisingly higher than rural rates. However, this difference may not apply to younger women because use of modern contraception techniques is considerably higher in urban areas (and far higher in Lower than Upper Egypt).

Table V.1.

Egyptian Fertility and Family Planning Patterns [3/]

| | Urban Governorates | Lower Egypt | | Upper Egypt | | TOTAL |
|---|---|---|---|---|---|---|
| | | Urban | Rural | Urban | Rural | |
| Ever-Married Women Aged 45-49 | | | | | | |
| Mean Number of Children Ever Born | 6.3 | 7.4 | 7.1 | 6.9 | 6.8 | 6.8 |
| Average Number of Children Surviving | 4.8 | 5.5 | 4.9 | 4.8 | 4.3 | 4.8 |
| Percent of Married Women Under Age 50 Currently Using: | | | | | | |
| Modern Contraception | 43% | 41% | 18% | 33% | 4% | 24% |
| Pills | 26% | 33% | 13% | 21% | 3% | 16% |
| IUD's | 8% | 4% | 3% | 7% | 1% | 4% |
| Other | 9% | 4% | 2% | 5% | - | 4% |

## II. History of CARE/EFPA Nutrition Services/Family Planning Awareness Project:

In September 1976 CARE and EFPA signed an agreement for a "Nutritional Services" Project. The project had four stated objectives:[4/]

1. To develop a practical system of community nutrition services, integrated with family planning services, and to determine whether the supplementary food provided at EFPA centers will stimulate greater exposure to and participation in nutrition and family planning activities.
2. To promote better nutrition and related health practices amongst women and mothers of pre-school age children availing themselves of family planning services offered by voluntary agencies associated with the Egyptian Family Planning Association.
3. To test the assumption that the provision of nutrition services, including supplemental foods to women and their pre-school age children through centers also offering family planning services, will benefit family planning efforts through increased contact with eligible women and enhancement of the image and effectiveness of the program.
4. To determine whether the assumed reduction in perinatal, infant and pre-school child mortality and morbidity achieved through the provision and integration of family planning and nutrition services will eventually have a favorable effect on the desire of women to limit family size.

Objectives 1,3 and 4 suggest that the project was essentially a research effort while objective 2 focused on better nutrition among women in the project. Under the five year agreement CARE was to provide under PL-480 Title II 36,600 metric tons of fortified protein cereal foods (valued at $12,036,000) and $427,000 in Section 204 funds. The commodities were to be distributed through EFPA centers to 500,000 beneficiaries. Also provided were five vehicles and 1.5 million Vitamin A tablets.

The project commodities were distributed to about 2,000 women in a trial basis during June 1977 and expanded to about 30,000 roughly a year later. The ration received by each women (corn soy milk or CSM) assumed that she had one pre-school child. The project was designed to provide beneficiaries with nutrition education along with the food.

Though the project looked appealing at the beginning, the project activities did not materialize as planned. The project was audited by the USG-AAG in the fall of 1978 and the audit was critical of the project for two basic reasons [5] : (1) the project was basically a research effort yet the audit did not find that acceptable sampling methods were being utilized; (2) the project was very far behind schedule in terms of reaching planned beneficiary target levels and expending the Section 204 funds. The apparent reason for slow implementation was lack of administrative and institutional capacity of the EFPA, who was given almost full responsibility for implementing the project. The criticism of the audit was apparently a function of the over-optimistic targets

established by the project plan and the underestimation of the capacity of the EFPA. The audit recommended that the project be terminated.

As a partial consequence of the audit, the Section 204 portion of the project was allowed to expire on May 15, 1979, and the unexpended portion of the grant (over 75%) was returned to the USG. The Title II commodity portion was allowed to continue. A number of changes have been made to the commodity portion of the project, not all of which resulted from the audit:

1. Shift in project focus from nutrition to family planning.
   A. The project objective was reduced to using food commodities as an incentive for mothers to come to the centers for family planning services. These objectives were to be measured by:
      (a) Number of women registered in the project;
      (b) Number of visits to centers by doctors each month;
      (c) Record keeping by centers;
      (d) Number of registered women attending family planning lectures each month.
   B. The CARE Project name changed from "Nutritional Services" to "Family Planning Awareness" 6/.

2. The number of pre-school children beneficiaries per women was increased from one to two (i.e. three beneficiaries per family) starting in FY 1981. Apparently, this change was made to provide women with a larger ration and consequently larger incentive to go to

the family planning clinics.

3. The commodities were changed from CSM (distributed 1977 to 1979) to oil and CSM (distributed in 1979) to oil and soy fortified flour-SFF (distributed in 1980 and 1981). The addition of oil (a highly valued commodity) was taken to improve the irregular attendance of recipients. The switch from CSM to SFF was taken as a cost saving measure; the switch was also popular among recipients.

4. The frequency of distributions at EFPA centers was changed from once every week or two to once a month. This change to providing a larger ration less often was taken to improve the irregular attendance (of recipients registered in the program) which occurred with more frequent distributions.

5. The number of planned and actual recipients increased rapidly even after correcting for the expansion in the number of recipients per family from two to three. The planned number of recipients jumped from 51,000 in 1979 to 120,000 in 1980 to 240,000 in 1981 (FY 81 AER). However, the actual number of recipients for these years were about 50,000, 80,000 and 130,000, respectively. CARE and EFPA operated under the assumption that the FY 81 AER* would be approved in full and therefore distributed food accordingly.[7/] The full AER was not approved in Washington causing a precipitous drop in number of food recipients as centers ran out of food.

*Annual Estimate of Requirements - indicates the amount and type of PL 480 Title II commodities requested each year.

Table V.2 shows the growth in the number of recipients by governorate. Through the life of the project the majority of recipients have been in Cairo and Alexandria. Table V.3 shows growth in distribution of commodities. In 1980, enough food was distributed for 53,086 monthly flour rations (112,351 X 5.67 ÷ 12) and 72,423 quarterly oil rations (48,282 X 6 ÷ 4). However, there were about 80,000 women registered in the program in April 1980. These data verify the irregular attendance of women registered in the program. Such irregular attendance for the food incentive suggests irregular purchases and use of pills and thus ineffective family planning. The discrepancy for 1979 is even greater: about 50,000 were registered in April and enough oil rations were distributed for only 33,150 and flour for only 29,430. Apparently, the number of women registered in the program at any one time is not a fair measure of the number coming regularly for commodities and birth control services. In addition, the programmed level of recipients is usually more than the actual number of recipients; these discrepancies suggest that the food distribution component of the project has not been without problems.

Table V.2

## NUTRITION AWARENESS PROJECT

### NUMBER OF REGISTERED WOMEN IN GOVERNORATES PARTICIPATING IN THE PROJECT AT THE END OF APRIL OF EACH YEAR OF THE THE PROJECT

| GOVERNORATES | APRIL 1977 | APRIL 1978 | APRIL 1979 | APRIL 1980 | APRIL 1981 |
|---|---|---|---|---|---|
| 1- CAIRO | As of Nov. 77 1092 | 3002 | 10527 | 14128 | 23554 |
| 2- ALEXANDRIA | As of Sept.77 3742 | 7534 | 21437 | 34150 | 45028 |
| 3- GIZA | ----- | As of Oct.78 2221 | 5214 | 7439 | 18777 |
| 4- GHARBEYA | As of June 77 1200 | 4391 | 7247 | 11264 | 17784 |
| 5- QUALUBEYA | ------ | As of July 78 700 | 2406 | 6962 | 11835 |
| 6- MINYA | As of Nov.77 460 | 1244 | 2947 | 5677 | 11047 |
| Total | | | 49,778 | 79,620 | 128,025 |

Note : The sudden increase as of 1979 due to introduction of Oil and in 1980 due to the change of CSM to Flour also the effectiveness and improvement of the EFPA in the project activities and adding new centers.

SA.

Source: CARE - Egypt

Table V.3

QUANTITY OF FOOD DELIVERED TO EACH GOVERNORATE SINCE THE BEGINING OF THE PROJECT IN EACH CALENDAR YEAR.

| GOVERNORATE | 1977 YEAR CSM | 1977 YEAR OIL | 1978 YEAR CSM | 1978 YEAR OIL | 1979 YEAR CSM | 1979 YEAR OIL | 1980 YEAR FLOUR | 1980 YEAR OIL | YEAR 1981 FLOUR | YEAR 1981 OIL |
|---|---|---|---|---|---|---|---|---|---|---|
| 1- CAIRO | 3179 | -- | 6814 | -- | 31332 | 5671 | 24745 | 9220 | 3014 | --- |
| 2- ALEXANDRIA | 855 | -- | 17812 | -- | 2949 | 7559 | 36107 | 17788 | --- | 3000 |
| 3- GIZA | --- | -- | 942 | -- | 6210 | 1970 | 16068 | 5475 | --- | --- |
| 4- GHARBEYA | 2020 | -- | 7839 | -- | 13164 | 4312 | 19946 | 10717 | 4251 | 1236 |
| 5- QUALYBEYA | ---- | -- | 1289 | -- | 3652 | 760 | 4799 | 2133 | 7325 | 920 |
| 6- MINYA | 528 | -- | 2713 | -- | 4979 | 1831 | 10687 | 2949 | 2110 | 1000 |
| | | | Total = | | 62,286 | 22,100 | 12,351 | 48,282 | | |

P.S.

1- Oil in Cartons, Flour & CSM in bags of 22.68 Kgs

2- Flour replaced CSM on March 1980

3- CSM used to be distributed from 1977 till end of 1979

4- Oil First introduction in April 1979

5- 1981 data till last distribution took place on May 14, 1981

SA.

Source: CARE - Egypt

## III. STRATEGY: Use of Food as an Incentive:

### A. Project Strategy:

The current objective of using food as an incentive for increasing family planning acceptance is based on a straightforward strategy. Women come to the center and register for the program because they are interested in the free food distributions. After talking to the social worker and being examined by the doctor, a woman can be registered in the program. After buying a cycle of pills for LE .05,* she can return the second month to purchase more pills and receive the food ration. Though the center has no way of being sure that the women take the pills, the strategy is that women registered on the project may eventually become acceptors of family planning by purchasing the pills, talking with the social worker, attending family planning awareness lectures (these are said to be required,however centers do not keep records of the women who attend such lectures), talking with acceptors at the clinic, and thus gaining better understanding of the advantagees and methods of family planning.

The strategy appears sound. Available data suggest that women in the project have fewer children than those outside the project. (See beneficiaries section, later). This strongly suggests that women in the program are indeed taking the pills and thus averting births. Given the project strategy, it appears that women at nonproject centers - who come just for family planning information and pills - would have fewer births than women at food

*About $.07.

project centers - who come primarily for food and have to purchase the pills whether they want to swallow them or not. If this scenario is correct then it is unclear what differences between the EFPA nonproject (non-food) and project centers really mean in terms of the success of the project.

B. Strategy Issue

The project strategy is based on one explanation or scenario of women in the project. An alternative explanation for women entering the project is that they have already accepted family planning and come to the project centers (instead of other family planning outlets) because the project centers give food. If this is the correct explanation, then the EFPA food project centers might be attracting lots of women away from other family planning facilities but are not generating new acceptors. This is a chicken and egg question: (A) Do non-acceptors come for the food and later some become permanent acceptors or (B) Do previous acceptors come to the center because it gives food. Undoubtly both exist, the question is which pattern is predominate. A recent in-depth survey of 1009 women registered in the project in late 1979 indicated that 56.6% started using contraception in 1977 or earlier (See Impact Section - later)—8/. This suggests that both explanations are operative with explanation B a bit more predominant. It seems that explanation A is very probably predominate in Upper Egypt rural areas(where birth control acceptance rates are only 4%). On the other hand, explanation B might be more dominate in urban areas such as Alexandria, Cairo and Giza(where birth control acceptance rates are about 40%). These three governorates were dropped

from the project in the FY 82 AER. We might expect that the project centers in urban areas may have had limited impact on generating new acceptors whereas those in rural areas, especially those in Upper Egypt may have had a greater impact. In terms of project strategy and impact, explanation A provides a basis for continuing the project (i.e. using food to gain new acceptors). On the other hand explanation B (feeding previous acceptors) provides a very weak justification for the project. Consequently, the characteristics of the project (geographic focus and selection criteria for women) should be altered so that explanation A is more predominate (See later sections on "Beneficiaries" and "Impact").

## IV. Current Operation of CARE/EFPA Family Planning Awareness Project:

### A. Size of Program:

The project in 1980-81 was programed to reach 120,000 recipients (40,000 mothers and 80,000 children), through 150 centers in six governorates [9]. Note that since the project is responsive to demand at centers, the program distribution of recipients can be quite different from the actual distribution (See Table V2 in previous section).

Table V.4
FY 80 Program

| Governorate | No. of Centers | No. of Recipients |
|---|---|---|
| Cairo | 49 | 39,198 |
| Alexandria | 35 | 27,999 |
| Giza | 22 | 17,553 |
| Gharbeya | 14 | 12,000 |
| Kalubeya | 14 | 11,250 |
| Minia | 16 | 12,000 |
| TOTAL | 150 | 120,000 |

The FY 81 program provides 1,944 metric tons of soy fortified flour - SFF and 648 metric tons of oil valued at $661,000 and $640,000 respectively using FY 81 prices. During FY 82 the same amounts of commodities will cost $700,000 and $668,000, respectively.* The MSA covers most of the project costs, in 1980 MSA payments covered IMC transportation and storage of

*This suggests an annual food cost of about $34 per woman contraceptive user. However, on the heavily subsidized Egyptian market, the food would only cost about LE 9.36 (about $13.50). Thus to the beneficiaries in the program, the food incentive has a value of only about 40% of its cost.

commodities (LE 55,000), CARE project administration and overhead (LE 32,000 and $22,400), and costs of operating the project - EFPA administration and overhead, salaries and incentives for MSA employees seconded, incentives for seconded MOH doctors and nurses, preparation and distribution of booklets, etc. (about LE 100,000).*

B. Reducation in Number of Centers:

To better achieve the project objectives in FY 82 "perennially problematic centers have been eliminated from the project while conversely, those centers that have demonstrated highly capable managerial administrative abilities will have recipient levels increase" 10/. The program will be reduced to 40 centers in only three governorates: Gharbeya (14 centers), Kalubeya (14 centers) and Minia (12 centers). The 106 centers in Alexandria, Cairo and Giza which now serve roughly 2/3 to 3/4 of all recipients will be dropped from the program. The total program recipient level will remain at 120,000; thus there will be a very large programmed increase in the number of recipients at the 40 centers remaining in the project. The termination of the project in Alexandria, Cairo and Giza should not be interpreted to mean that all the centers in these governorates were plagued by perennial problems. The major problem in Cairo and Giza (centers in greater Cairo area) has been delivering the commodities to centers since trucks can only drive in the city legally at night and there is nobody at the centers to receive the food at that time. On the other hand the project has operated more efficiently in Alexandria than

*Thus the MSA total in 1980 was about LE 187,000 and $22,400 (or roughly $290,000 - about $7.25 per woman in the program).

other governorates. The main rationale for dropping the project in these essentially urban governorates is to concentrate on non-urban governorates where the need for family planning acceptance is greater. (However, most of the recipients in the so-called "non-urban" governorates appear to be urban - i.e., residents of large regional centers such as Minia, Tanta, Kafr El Zayatte. Currently family planning is practiced by about 40% of women in such cities, so the need for family planning in such cities is about the same as that in Cairo and Alexandria).

C. Logistics and Administration:

CARE obtains PL 480 commodities from the U.S. Government (USG) and monitors and directs the movements of these commodities in Egypt. The IMC is directly responsible for transferring the food from the port to the centers and is responsible for covering all loses and damages resulting from this process. For each shipment, CARE receives a bill of lading and (with EFPA) prepares a distribution plan which is submitted to IMC. When the commodities arrive at the port in Alexandria, they are received by the IMC who clears them through customs and transports them to their warehouses according to the distribution plan. The IMC operates seven warehouses, located in Benha, Minia, Tanta and two each in Cairo and Alexandria. The warehouses are constructed of stone or brick, are dry, and apparently there is no storage problem.

As directed by CARE and EFPA, the IMC trucks the commodities from the warehouses to EFPA centers where the food is distributed. Some problems have been experienced in moving the food to the centers, especially in Cairo and Giza. Recipients are entitled to a ration of food each month and find out when the food shipment has arrived at centers and go to the centers to receive their ration. The table below summarizes the different agencies involved in the project and their responsibilities.

Table V.5. Agencies Involved in PL 480 Title II Family Planning Project

| | |
|---|---|
| CARE | - obtains PL-480 commodities.<br>- overseas and monitors the project.<br>- develops (with EFPA) distribution plan for allocating correct amounts of food to appropriate warehouses and centers. |
| Egyptian Family Planning Association (EFPA) | - responsible for central administration of project.<br>- develop and distribute to centers nutrition and family planning materials.<br>- provides courses to center personnel on record keeping, nutrition and family planning. |
| Inter-Ministerial Committee (IMC) | - takes possession of commodities at the port, clears them through customs, and transports them to IMC warehouses according to CARE/EFPA plan.<br>- stores commodities at warehouses until distributing them to centers according to release orders from CARE/EFPA. |
| Ministry of Social Affairs (MSA) | - funds all the project except food and family planning commodities.<br>- provides through secondment five full time staff for EFPA-Cairo and social workers and (store keepers) for each center in project<br>- at governorate level overseas and administers project. |
| Ministry of Health (MOH) | - provides through secondment doctor and nurse for each center<br>- provides birth control pills and other family planning paraphenalia. |

| | |
|---|---|
| Volunteer Agencies | - provide building which houses center |
| | - overseas activities in each center |
| | - promote center and serves as link between center and local community |
| Volunteers | - help around center |
| | - promote center outreach and family planning awareness by linking center to local community. |

Note: The project involves cooperation between numerous organizations: CARE, EFPA, IMC, MOH and a variety of voluntary agencies. Such cooperative arrangements are difficult to establish and maintain. This is one of the reasons why the project made slow progress at the beginning. However, at present the cooperative arrangements have been made and are apparently operating with a degree of success, this is an accomplishment in itself.

D. Ration:

The current ration size comes from the Food for Peace Handbook and is based on the needs of one mother and two children under age five. The same ration is given to all mothers in the program regardless of the number of children she may have. The ration is designed to provide each individual participant (one mother and two children per family) with 45 grams of soy fortified flour and 15 grams of soy bean salad oil each day. At 30 days per month, this works out to 4.05 kilograms flour and 1.35 kgs. oil per family per month. According to the plan, flour is distributed once a month and the oil is distributed once every three months in 3.48 kg. tins; thus the oil ration is actually only 12.9 grams per day per beneficiary. Adjustments are made in the last call forward to take account of difference in the planned and actual ration size.

The monthly ration received by a participating family would cost about LE 0.78 on the subsidized Egyptian food market. This represents about 0.8% of median household income.[11/] The fact that the ration is so cheap on the local market and has such an insignificant income effect raises questions concerning its value as an incentive.

The ration was expanded in FY 80 by increasing the number of child beneficiaries per woman from one to two. This increase was designed to provide a bigger incentive for women to enter the centers. The strategy worked and the number of women registered in the program increased rapidly since the beginning of FY 80. The current ration appears to provide an adequate incentive.

E. EFPA Project Centers:

The EFPA/CARE Project is administered through some of the more than 400 EFPA centers. The planned number of centers in the project has varied considerably (150 in FY 81, but will be reduced to 40 in FY82.) On 31 December 1980 there were 139 centers in the project. Criteria for selecting EFPA centers for the project are:

1. Must be in one of the governorates that is included in the project;
2. Must have suitable facility (adequate storage area, examination room, kitchen for food demonstration);
3. Must have nurse, doctor (available 2 hours a day, three days a week), storekeeper, and social worker;
4. Must agree to learn and use EFPA procedures and record keeping system.

These criteria are relatively rigorous, consequently only the better EFPA centers (in project governorates) have been admitted to the project; these are primarily located in urban areas.

The project is implemented through local Ministry of Social Affairs (MSA) centers which provide an umbrella for a large variety of voluntary organizations involved in service delivery. The actual building which houses the center generally is owned by a voluntary agency or may be rented. The building usually houses a variety of services provided by a number of voluntary agencies. The social worker and storekeeper for the EFPA activity are full time MSA employees who work part time in the project centers for

an additional 50% of their regular pay. The doctors and nurses in the project are full time Ministry of Health (MOH) employees in local MOH facilities who work part time in the project centers for incentive pay equal to 50% of their regular salary. In addition, the doctor gets part of the 5 pt. the women pay for pills each month.

Since the centers are staffed by part time employees who have full time jobs, they can only be open after regular working hours. Consequently, most centers are open only two hours in the late afternoon and evening (perhaps 6 to 8 pm.). In addition, the centers are only open three days a week and, in general, most centers offer all services whenever they are open (i.e. there are not special days for examinations or food distribution). However, some of the centers in large urban areas have specific days for food distribution so that on the other days regular center activities can continue without being disrupted by the large number of women who come for food.

Since the services obtained from the centers are provided by volags, there are volunteers associated with each center. The volunteers provide a link between the center and the community. As with most volunteer programs, the skills provided by the

volunteers and the amount of time they donate varies a great deal from center to center and from volunteer to volunteer.

The quality of EFPA centers would be expected to vary a great deal from center to center given the voluntary nature of EFPA, differences in the ability of the staff, differences in the quality of the facility housing in the activity, differences in the number and commitment of volunteers, and differences in community support for family planning. (Site visits to some of the (better) centers suggest that the approach can work and women efficiently can obtain family planning and food. On the other hand, the turnover of centers in the program(perhaps one in ten has been dropped) suggests that some centers have had some difficulty implementing the program).

Records are an important part of EFPA centers in the project. The central EFPA headquarters in Cairo offers training for center personnel in record keeping, provides centers with an instruction books on record keeping, and encourages accurate record keeping. The project includes ten different types of records or forms (Table V.6) the most important of which are:

1. Personal information on each registered women (age, occupation, number and age of children, husband's occupation, etc.)
2. Issuing (ration) card for each registered woman.

## Table V.6

### BOOKS, RECORDS AND FORMS USED BY THE EFDA, CENTERS

FORM NO.1-

Status form, Contain the recipient Personal info. i.e. husband & children.

FORM NO 2-

Issuing card, carried by the recipient and used when she go to center to receive food, the Social Worker sign this card when recipient receive her food.

FORM NO 3-

REGISTERATION BOOK. Contain a serial number of all of the center Women and addresses.

BOOK NO 4 -

DISTRIBUTION BOOK, There every women sign when she receive food.

BOOK NO.5-

E ROOM RECORD BOOK, Contain info. about the outgoing and incoming

FORM NO.6-

REGISTERATION RECEIPT, every registered women pay 10 P.T. registeration fee against a receipt.

FORM NO. 7-

ADDITION RECEIPT, used when they receive the food, CARE get copy from this receipt.

BOOK NO. 8-

MONTHLY STATISTICAL SUMMARY, about the center activity i.e. no of recipient every month and the quantity of food distributed for them.

BOOK NO. 9-

All the province centers activity, contain all necessary info. about the province centers, prepared Monthly by the Province Supervisor .

FORM NO. 10-

Receipt for 10P.T. against every empty tin of oil paid by the recipient.

SA.

## F. Beneficiaries and Impact

### 1. Criteria

To be eligible for the program women we must meet the following criteria established by EFPA - Cairo.

- Married
- Examined and cleared by doctor for family planning
- Between ages of 16 and 50
- Cannot be registered with more than one EFPA - food project center.

Because the amount of food has become a constraint on the number of women in the program, some centers have established additional criteria:

- Must have at least one child
- Husband cannot be away (perhaps working outside the area or in the Gulf)
- Must have loop inserted (suggested but not enforced)
- Cannot have more than four children (i.e. otherwise will be willing to use contraception without food incentive)

The EFPA is considering altering the standard criteria to better target the program

- Ages between 16 and 35 or 38
- Must have at least one child

It should be noted that at present beneficiaries are not required to have any children (even though the ration is based on the needs of a mother and two children under age five).

However, the recent EFPA evaluation survey indicates that 0.7% of beneficiaries were childless [12]. In addition, there is no income need criterion which makes sense given the family planning objective of the project.

2. Suggestions of Additional Criteria:*

It is suggested here that to better target the project additional criteria be considered:

Women must not be already acceptors of family planning when joining the program. Previous acceptors do not need the food incentive. At center in Kafr El Zayatte, 230 women of the 627 beneficiaries (37%) were registered with EFPA for contraceptives before the food project started. Data from the EFPA evaluation survey revealed that over half of project recipients were using contraception before the project started [13]. Though this criterion may seem unfair (to those already using contraception) and may cause some administrative adjustments, it seems worthy of serious consideration if the project is really concerned with maximizing new acceptors.

- Perhaps the project should be limited to women who have given birth within the last year or two. This group of women are fertile and apparently were not previously practicing contraception.

*CARE feels that these criteria might be difficult to implement at centers or are unfair. CARE would prefer to improve targeting by setting a maximum age. Though this would do a great deal to improve current targeting, even better targetting would be achieved by restricting the project to new acceptors and limiting participation in the program to one year. What is needed is a reasonable plan which moves in the direction of better targetting at a pace which does not disrupt completely the operations of the centers.

- Women can only participate in the food program for one year. If they have come for food for a year and have become true acceptors of family planning, then they no longer need the food incentive. Though this change would maximize new acceptors, it might adversely affect the project's impact on maintaining current contraceptive use.

- Perhaps the project might be restricted to rural areas, especially in Upper Egypt where need is highest. Acceptance rates in urban areas are already around 40% and urban women may not need the food incentive to become introduced to family planning. However, a shift of the project toward rural areas may result in severe administrative and logistic problems. Some rural EFPA centers at present may not be capable of efficiently administering the project. Perhaps additional technical assistance is needed to upgrade the capability of these rural centers.

3. Characteristics of Beneficiaries:

The recent EFPA evaluation survey of a random sample of 1009 project recipients provide considerable data on project beneficiaries.[14/] The survey appears to have been very carefully conducted and the data are considered to be very reliable (and consistent with observations made during field trips). In general beneficiaries are old, effective users of contraception, urban, and less apt to be illiterate than other women (perhaps suggesting higher socio-economic status).

a. Age:

The recent survey revealed the following age distribution:

| | | | | | |
|---|---|---|---|---|---|
| less than 20 | - | 0.3% | 30 - 35 | - | 25.6% |
| 20 to 25 | - | 5.1% | 35 to 40 | - | 27.5% |
| 25 to 30 | - | 17.5% | over 40 | - | 23.6% |
| | | | not stated | | o.4% |

Thus over half are at least 35 years old and the mean is 34.8 years compared to a mean of 30.8 years for women registered for family planning at EFPA centers before the project started. Thus it appears that the food has attracted older women to the centers.

b. Use of Contraceptives:

One of the most interesting findings of the survey was that about 55% of the women in the project in late 1979 had started to use contraception before 1977, the year food distributions started.

| Year Started Contraception | % |
|---|---|
| 1970 and before | 15% |
| 1971 to 1973 | 13% |
| 1974 to 1976 | 27% |
| 1977 | 18% |
| 1978 | 21% |
| 1979 - 1981 | 6%* |

*The Survey conducted from July 1979 to April 1980 therefore very few of those entering the project in 1979 and 1980 were captured in sample.

These data indicate that the majority of women were acceptors when they entered the program. Consequently the food project cannot claim responsibility for their current use of contraceptives, though the food may have encouraged them to continue family planning. The project objective is to gain new acceptors, not attract old acceptors. The data suggest that greater accomplishment of project objectives would be achieved if project eligibility were restricted to new acceptors.

The data above do have a positive side. It appears that about a third of the women (1980,79,78 and half of 77 conceptive acceptors) became birth control acceptors when they first registered in the project centers. Probably, a sizeable proportion of these were attracted to the center by the food ration. Thus the food appears to be having a significant impact on new acceptors which are becoming effective family planners (see following paragraph and next section). Potentially, the food could be having a much greater impact if selection criteria were changed and previous acceptors were excluded from the program.

The survey revealed that 89% of the women surveyed were currently using contraception, 4.5% were pregnant (either planned or unplanned), 1% had stopped contraception because they wanted to get pregnant (these are counted as family planning acceptors who were planning to have another child at the time of the survey), 2.8% ceased contraception because their husband had died or were away (perhaps working in the Gulf) or were ill. The remaining few

ceased contraception for health reasons, or old age, or a variety of other reasons. These data indicate that women in the project are effective family planners.

c. Fertility Behavior:

Very few women in the sample got pregnant. At the time of the survey, about 85% of the women had the same number of children that they had when they entered the project. (Some of these may have given birth to a child but also lost an older sibling through death). About 3% had fewer children through deaths and only 11% had more children (i.e. had given birth since entering the project). (Though pregnant women are dropped from the program, the researchers located all project drop-outs and interviewed them). The data strongly suggest that the project succeeded in limiting the number of pregnancies of women in the project*. The argument would be stronger if data were available on the length of time the surveyed women had been in the program, though the data above on "year started contraception" suggest that most surveyed women had been in the project for roughly one to three years.

d. Number of Children:

The women in the project (average age of 35) had an average of 3.9 children compared with the Lower Egypt urban control average of 5.5 surviving children (7.4 ever born) for married women 45 to 49 years old. 15/ Without additional information, it

*The data do indicate that the project is having an impact. It would be interesting to compare the impact(on birth rates) of these EFPA centers with the impact of family planning programs operated through the Ministry of Health.

is difficult to say with certainty whether women in the project are ahead or behind the national average; however, it appears that women in the project have lower fertility than the control. The following table gives the distribution of number of children.

| | | | |
|---|---|---|---|
| No children | 0.7% | 6 children | 10% |
| 1 child | 7% | 7 " | 6% |
| 2 children | 19% | 8 " | 3% |
| 3 children | 21% | 9 " | 0.5% |
| 4 " | 19% | 10 or more | 0.3% |
| 5 " | 13% | Median = | 4 children |

e. Drop Outs

Of the 1009 women in the sample, 198 (about 20%) had dropped out of the project. However, half (98) of the project dropouts were still using contraception, though they were no longer getting their pills (or food) from the EFPA center. This very interesting information (assuming the women responded honestly in this questionnaire item) suggests that the GOE's "redundancy system" of family planning is working* In addition, the information complicates future evaluation work and points out the crucial importance of following-up dropouts.

The drop-out rate (of 20%) is impressive for women who have been in the program for roughly one to three years. A dropout study of all EFPA centers in Egypt in early 1978 indicated that about one

*The data suggest that some women leave the EFPA system and obtain family planning services from the MOH or private system. Undoubtly, there is also a reverse movement. In any case, the EFPA centers appear to provide a viable alternative to the other systems.

third of all women registered at the centers, drop-out each year. Thus after two years about 45% (.67 X .67) will have dropped-out. In comparison the centers in the food project have a very good drop-out rate. Though the centers in the project were considerably better than other EFPA centers before the project started, it seems very reasonable that the food itself plays an important role in reducing drop-outs.

f. Growth of Registration at Project Centers:

The EFPA places importance on the rapid growth in the number of women registered at project centers, especially as compared to control EFPA centers. They point out that registrations at surveyed project centers leaped from 1939 (in 1977) to 5193 ( in 1979) for and increase of 168%, while control center registrations went from 1068 to 631 for a decrease of 44%. However, these numbers indicate very little about project success. Centers nearest to some of the project centers were selected as control centers (so that they might be as similar as possible to project centers.) The registration data strongly suggests that women previously registered at control centers, switched to project centers to obtain the food ration. In addition, women obtaining family planning services from other sources probably also switched to project centers to obtain the food. Consequently, the very rapid growth of registrations at project centers indicates very little about the accomplishment of the project objective, i.e. use of food as an incentive to increase new acceptors.

8. Illiteracy

The baseline study for the EFPA evaluation indicated the following illiteracy levels for women registered at EFPA centers before the project started: Cairo - 63%, Gharbeyia - 75%, Minia - 44%. The 1976 census indicates the illiteracy rates for these three governorates are about 67%, 85% and 92% respectively. These data suggest that women coming to the EFPA family planning centers are less apt to be illiterate than those who do not come. Thus it appears that women in the project may be from slightly higher socioeconomic classes than the general population.

## V. Measuring Impact:

### A. Clarification of Desired Project Impact:

Assessing the impact of the project (food distributions) on the acceptance and effective practice of family planning (new acceptors) is very difficult. The project records indicate that the food has definitely increased the number of women registered at the centers. However, this does not necessarily mean that more women have become acceptors. A number of possibilities exist. Women who were already acceptors may have switched from their previous family planning sources to the EFPA center because they obtain free food along with the pills. (These women are designated group X and represent perhaps 50-60% of current recipients.) This is probably the predominate pattern in Cairo and Alexandria where almost half of all women at risk are already practicing modern contraception. Thosein group X are not new acceptors and cannot be counted as part of the desired project impact.

On the other end of the spectrum is group Z, who join the program solely for the food and throw the pills away without every considering their use. These women do not become acceptors and cannot be counted as part of the desired project impact. Group Z is probably a minority in both urban and rural areas (perhaps 5 to 10%).

Group Y is composed of those women who join the project primarily for the food but are open to family planning information. By being in the project, talking to the social worker and group X acceptors, seeing films, having the pills, these women may become

confirmed acceptors of family planning. The portion of group Y (defined as Y1) who accept contraception and become regular users constitute the desired impact of the project. The remainder of group Y (defined as Y2) do not become permanent users but may have become more aware of family planning advantages and practices by being in the project. While those in group Y1 are the main impact of the project; group Y2 women may be counted as a secondary impact. Unfortunately, due to the presence of groups X and Z it is difficult to measure the size of group Y (let alone distinguish between Y1 and Y2); consequently assessing the impact of the project is difficult.

B. The EFPA Evaluation Study:

The EFPA evaluation study was designed to assess accomplishment of the four stated objectives. Portions of objectives 1 and 3 appear to imply the type of desired impact being discussed in this section. Unfortunately, the EFPA evaluation study does not directly assess impact because no distinctions are made between groups X, Y, and Z. However, by sorting the EFPA questionnaires into groups X, Y and Z and computing changes in age specific parities over the life of the project, one could assess impact and perhaps speculate about attributions.

C. Alternative Approaches:

A few different research designs can be suggested for evaluating project impact.

1. Household Fertility Survey of Project and Control Communities: (EFPA has considered such a survey).

   a. Hypothesis: Parities (number of children standarized by age) in project areas are less than those in control areas.

   b. Control communities have EFPA centers which are not in feeding program.

   c. Problems:

      - Surveys are time consuming and expensive.
      - Most EFPA food project centers are in urban areas where other family planning services are provided.
      - The EFPA centers in the food project are (on average) better centers than the EFPA non-food project centers. Therefore a true control group cannot be found.

2. In-depth Recall Survey:

In-depth surveys of women who were in the project in Cairo, Giza or Alexandria could be conducted to try to determine if they are in group X, Y1, Y2 or Z. Better, more candid answers might be forthcoming from these women from centers (which are being dropped from the project in FY 82) because such women need not worry about saying something which may cut off their food ration.

Problems: - Surveys are expensive, time consuming.
- Must rely on recall.
- Hard to do follow-up surveys in large urban areas.

3. Comparisons Using Center Records: (available at least at some centers in Gharbeya and perhaps elsewhere).

a. Groups:

(1) Women accepting family planning (pills) after food project started (Group YZ). Obtain paritities upon entering the project ($YZ_0$) and after each year in the project ($YZ_1$, $YZ_2$, etc.)

(2) Control (Group C) paritities of suitable Egyptian norm for the area (i.e. urban vs. rural, Lower vs Upper).

b. Assumptions

(1) Data for control parities are available

(2) Upon entering project, Group $YZ_0$, has parities similar to control. If not, simple parity changes for experimental group will have to be used - i.e. comparing $YZ_0$ to $YZ_1$ to $YZ_2$, etc.

(3) All changes in parity of group YZ are attributable to the project - a big assumption.

c. Test of Impact:

(1) Assume impact if parity of $YZ_0$ greater than $YZ_1$ greater than $YZ_2$, etc.

(2) Assume impact if control parity greater than $YZ_1$, $YZ_2$, $YZ_3$. If assumption b.2. above holds.

d. Advantages:

- Records are readily available and appear accurate.
- Tests of impact are simple after parities are computed.

e. Disadvantages:

- Weak test of impact
- Those in group YZ who have dropped out must be carefully followed-up. This is particularly important for those who dropped out because they were pregnant. Some centers have already conducted follow-ups and have fairly good data on women who have dropped from the program.
- Use of parities of control group presents problems because control group includes "true believers" in family planning while these (Group X) have been excluded from project Groups Y and Z.

D. Conclusion: Measuring Impact

Impact of the project is difficult to assess. Future evaluations should first attempt to evaluate impact using the comprehensive data collected in the EFPA study. If for any reason this approach is unworkable, researchers might attempt to use the approach of section 3 above (based on center records) as well as make some attempts to conduct some recall interviews described in Section 2 above.

## VI. Logical Framework for CARE/EFPA/MSA Family Planning Awareness Project

A. Problem:

1. Egypt is a crowded country with a population growth rate of 2.5-3.0%* per year which if unchecked will double population about every 26 years.
2. Only about 24% of Egyptian women currently use modern family planning methods. This percentage is lower in rural areas; 18% in rural Lower Egypt and only about 4% in rural Upper Egypt.

B. Goal:

The ultimate goal in the project is to reduce fertility rates in Egypt. A later section discusses "Objectively Verifiable Indicators" and"Means of Verification"). The specific goal of the project is reducing fertility rates in the project target areas which in FY 82 will be limited to the service areas of the 40 project centers in three governorates: Mina, Gharbeya and Kalubeya.

C. Purpose:

As a means to achieve the goal, the project has its purpose increased permanent acceptance and effective practice of modern family planning techniques by women who are not previously practicing family planning and are attracted to family planning centers by the

*Though the census indicates average annual population growth of 2.3% between 1966 and 1976, recent reports by the GOE statistics agency, CAPMAS, suggest that the rate is now 2.9-3.0%.

PL 480 commodities which are distributed there.

D. Outputs:

In order to achieve the purpose, the project will produce two basic outputs: (1) distribution of food at family planning centers, and (2) effective provision of family planning information, services and paraphenalia at the centers. The idea here is to use the food as an incentive to attract the women (who do not currently practice family planning) to the centers where they will obtain greater awareness of advantages and practices of family planning as well as direct family planning services (medical examinations, sessions with the social worker, and pills or other paraphenalia). The outputs are delivered through 40 EFPA/MSA family planning centers. The efficient operation of these centers is necessary for the delivery of project outputs.

E. Inputs:

Essential inputs are:

1. PL-480 food commodities
2. Monitoring and oversight by CARE
3. Efficient administration and provision of family planning informational materials by EFPA.
4. Space in buildings provided by local voluntary agencies for medical examination rooms, food storage rooms, record keeping, counseling, food distribution, and delivery of lectures and films on family planning.

5. Part-time social workers and food storage/distribution managers (seconded from MSA).
6. Part-time doctors and nurses (seconded from local MOH facilities).
7. Pills and other parphenalia provided by MOH.
8. Funds provided by MSA for:
   a. Salary incentives for part-time workers seconded from MSA and MOH.
   b. Costs of transporting food commodities.
   c. Costs of planning and administering the program.
   d. Cost of preparing, printing and distributing family planning informational materials.

F. Assumptions and Issues:

1. Assumption Linking Goal and Purpose:

It is assumed that women accepting modern family planning will have fewer children than non-acceptors. The assumption rationale appears to be that acceptors, by avoiding the possibility of pregnancy between "planned" births, will ceterus paribus have fewer pregnancies than non-acceptors. This rationale and the assumption appear sound.

2. Target Group Assumption and Issues:

It is assumed that most of the women attracted to project centers would not come without the food incentive. However, a number of women (the majority in urban areas) registering for the

project are already practicing family planning and therefore are not members of the target group (See Beneficiary - Impact discussions above). This inclusion of non-target group women in the program is wasteful of resources and seriously complicates evaluation. Very serious consideration should be given to adopting new criteria which: (a) require beneficiaries to be new acceptors (perhaps limited to those who have given birth in the last year or two); (b) gradually shift the project so that it focuses more on rural areas and on Upper Egypt. Criterion (a) would not be so difficult to implement and would greatly enhance project impact. Criterion (b) would be more difficult to implement and would not have as great an impact. Tc better reach rural women, rural EFPA centers may need technical assistance.

3. Assumption Linking Outputs to Purpose:

It is assumed that target group women in the project who come to centers for food will accept contraception after receiving family planning information and awareness. The validity of this assumption is strongly supported by the EFPA evaluation survey. Though the project aims to provide women with a real choice concerning whether or not and when to have children, the assumption is that women who are given this choice will (on average) choose to have fewer children. This assumption is basic to most family planning (fertility reduction) activities and is as reasonable in this project as it is in others.

4. Ration Issue:

Expansion of the project has been limited by the amount of food available. It appears that there are more women desiring to become recipients (and contraception acceptors) than can be accommodated. This suggests that to reach more women, more food is needed or the ration size should be cut. On the other hand, attendance at centers has been very irregular. Apparently, the present ration is not sufficient to bring recipients back to the centers every month. It should be added the lack of food at centers due to logistic problems is another major cause of irregular attendance.

Assuming for the moment that PL 480 Title II budgets are limited, consideration should be given to using a commodity and ration size which has a low PL 480 cost but which is highly valued in Egypt. In addition, there is also a logistic constraint on centers -- some women have dropped out of the project because of the hassle and crowds on food distribution days. The commodity used should be very easy to distribute. The commodity which best meets the above requirements appears to be non-fat dry milk (NFDM) which in Egypt is rather expensive (fresh milk in Cairo sells for LE .50 a liter). However the PL 480 cost of NFDM is low at $419/MT (about $.08 per liquid liter of reconstituted milk). In contrast the currently used commodities of soy fortified flour (SFF) and oil are rather expensive in terms of PL 480 budget, but very cheap in Egypt's subsidized market. The table below compares NFDM to SFF and oil. According to column C of the table, NFDM is almost 20 times as efficient as the currently used SFF and oil in terms of cost per unit incentive. However,

| Monthly Ration | A. PL 480 Cost ($) | B. Incentive Value: Cost on Egypt Market (LE) | C. PL 480 Dollar ** Cost per Unit LE |
|---|---|---|---|
| Current | | | |
| 4.05 kg SFF | $1.38 | LE 0.45 | |
| 1.35 kg oil | 1.33 | LE 0.41 | |
| Total | $2.71 | LE 0.86 | $3.16 |
| NFDM | | | |
| 2 kg (equivalent to 10 liters re-constituted) | $ .84 | LE 5.00* | $0.17 |

the value that average Egyptians place on milk may be less than its price; consequently the incentive advantage of milk might be overestimated. Even if common Egyptians place a value on milk of only LE 0.10 per liter (one-fifth the fresh milk price), it is still almost four times as efficient as the current SFF and oil combination. Milk has two other advantages. First, it comes in two kilogram packages which makes it very easy to distribute. Second, it is more nutritious in terms of protein than the currently used commodities. At a given budget level, the project would be able to reach over three times as many women by distributing monthly two kilogram packages of milk instead of the current ration. Milk appears to be a very attractive commodity for this project. However, changing commodities can present numerous problems and therefore such changes must be analyzed very carefully before decisions are made. In addition, CARE-Egypt is skeptical about the incentive value of milk; they doubt whether milk will provide a sufficient incentive to attract women to the centers. The acceptability of milk in Egyptian culture and society needs to be assessed prior to any final decision in this matter.

*Fresh milk equivalent price at LE 0.50/liter.
**Column A ÷ column B.

5. Assumption Linking Inputs to Outputs:

It is assumed the EFPA with assistance from CARE will continue to improve its administration of the project. During its first few years, project implementation suffered; there were serious problems of converting inputs into outputs, i.e. the food and family planning services were not being provided efficiently at the project centers. Many of these early problems have been overcome; it is assumed that progress in this direction will continue. Efforts to gradually shift the project to rural areas should be taken carefully to a avoid overburdening the capacity of the EFPA in rural areas. At the same time, efforts should be made to upgrade this capacity.

6. Input Cost Issue

The program is expensive. The average annual project cost per woman contraceptive user is about $38 ($34 for food and about $4.00 for food transport and CARE's overhead and administrative costs). This figure excludes the cost of paying the staff at each center and EFPA headquarters because these costs are independent of the food distribution project. The cost of $38 per user is about three times the normal cost of family planning programs. Of course, the food is being distributed and it has a definite value in and of itself. On the other hand, this project is focused on family planning; the food is only a means to an end, not an end in itself. If the project switched to monthly distributions of nonfat dry milk in 2 kilogram packages, the annual cost per user would be reduced to about $14 ($10 for food, $4 nonfood), which is competitive with other family planning programs. The project

would be even stronger if eligibility requirements were adjusted to exclude older women, to limit participation to one year, and to focus on new acceptors. If these changes were made, the project potentially could gain new family planning acceptors at a cost of about $14 each.

G. "Indicators" and "Means of Verification" for Goal, Purpose, Outputs, Inputs:

1. Ultimate Goal: Reduced fertility in Egypt.
   - Indicator: Fertility rate, child-women ratio, crude birth rate.
   - Means of Verification: Regular censuses, fertility surveys, etc., conducted by a variety of national and international groups.

2. Project Goal: Reduced fertility in project target areas.
   - Indicator: Fertility rate, child-women ratio, crude birth rate, etc.
   - Means of Verification: For the total project area, it is difficult to verify reduced fertility because many of the centers are in urban areas and serve an area with a large population. This population can obtain family planning services from a variety of sources. Though household surveys in the area could be compared to the 1976 census data to assess fertility trends in the area, attributing and changes in fertility to the project would be speculative. However, for centers in rural areas, attribution might be less of a problem, depending on the size and amount of other family planning services provided in the area. If the 1976 census data become available and provide an acceptable baseline, future evaluations might consider conducting household fertility surveys in selected project and control villages to

assess project impact. However, there is still a problem of attributing any observed fertility reductions to use of the food as an incentive. Perhaps it would be more fruitful to focus future evaluations on the women registering in the food-family planning project.

3. Purpose: Increased acceptance and effective practice of family planning by women attracted to family planning centers by the food.

Indicator:

The fact that women purchase pills, etc. (required if they take food under the program) is not a very good indicator that they are acceptors or effective users of modern family planning. Perhaps the easiest and best indicator of acceptance is pregnancy or the lack thereof. More specifically, changes in age specific parities among women in the feeding program provide an acceptable indicator of effective use of contraception.

Means of Verification:

Use of center records (See research designs in previous section on "Measuring Impact"). Verification is very difficult because non-target group women are included in the project. Recently collected raw survey data by EFPA provide a readily available means of verification.

4. Output: Distribution of Food:

   . Indicators:

      1. Number of women receiving regular ration.
      2. Amount of food distributed.
      3. Distributions missed due to lack of food at center

   . Means of Verification:

      1. Records of centers
      2. Monitoring and status reports (kept by CARE) based on center records sent to CARE through EFPA headquarters.

5. Output: Family Planning Services:

   . Indicators:

      1. Pills, etc. distributed
      2. Lectures and films presented and attendance figure
      3. Booklets and other materials available to center staff.
      4. Number of women examined
      5. Efficiency of center operation

   . Means of Verification:

      1. Records of EFPA centers and headquarters
      2. Site visits.

6. Inputs: Food Commodities:

   . Indicator: amounts and types of food transported to various warehouses and centers.

   . Means of Verification: CARE and EFDA records.

7. Inputs: Non-Food:

Specific indicators for non-food inputs are either obvious (number of social workers, etc. seconded for project, number of pill cycles delivered, MSA funding levels) or vague (efficient monitoring by CARE and administration by EFPA). The means of verification are either records (CARE, EFPA, MSA, or centers) or direct observation.

## Notes

1. Robert Burkhardt, John Osgood Field, and George Ropes, "Family Planning in Rural Egypt: A View from the Health System" Cairo University/MIT Health Care Delivery Systems Project monograph #6, Cambridge, Mass. June 1980. In 1980, the GOE statistical agency, CAPMAS, has indicated that current rate of increase is 2.9 to 3.0% per year.

2. USAID/Cairo, Project Paper Amendment No. 2 for Population Project (263-0029), p. 13.

3. Arab Republic of Egypt, Central Agency for Public Mobilization and Statistics, Egyptian Fertility Survey, 1980, Cairo, March 1981.

4. "Nutrition Services Implementing Agreement" between MSA, EFPA, IMC, CARE, 1976. The five year agreement for provision of Title II commodities did not actually begin until January 1977 and through a series of memo exchanges and expiration date of January 1982 has been agreed upon.

5. AAG 79.19, "Draft Report of Audit on PL 480 Title II Program and Section 204 Grant Managed by Cooperative for American Relief Everywhere (CARE)", 1978.

6. While the CARE and AID view of the project downplayed the nutritional aspects of the project, the EFPA continued to view the activity as a nutritional services project. Using some of the remaining funds of the Section 204 grant and other funds from the GOE, the EFPA has printed and distributed several nutrition booklets (Infant Child Feeding, CSM Recipes, Family Feeding, Flour Recipes, etc.), offered nutrition training short courses for center personnel (courses offered in Cairo with refresher courses in governorates), and developed film strips and other materials.

7. The FY 81 CARE operational plan included 133,000 recipients, but this number was increased to 240,000 in the AER. See Adelman NE/TECH memo to Electa Williams PDC/FFP, January 7, 1981 and attachments.

8. Research and Evaluation Section, EFPA, "Post Project Evaluation: Evaluation of Nutrition Project Field Work Study to Evaluate Plan, Implementation and Benefits" Cairo, (Forthcoming - 1981).

9. CARE - Egypt FY 81 AER and Turnbull (CARE - Egypt) to Amal Nassar (USAID/Cairo) memo of March 16, 1980.

10. CARE - Egypt FY 82 Operating Plan.

11. Price of oil in Egyptian ration system makes this calculation tricky. Low income groups are entitled to pay at a rate of 10 pt. per kg. for the first 100 to 450 grams (per family member). The amount (100 to 450 grams) depends upon which governorate the family lives in. Additional oil can be purchased at 30 pt./kg. up to another limit. Without knowing actual consumption amounts, it is here assumed that the PL 480 oil provided in the project is valued by recipients at 30 pt/kg. The ration price for flour (unfortified) is 10 to 12 pt. (assume 11 pt.). Thus the family cost of the ration would be:

| | |
|---|---|
| oil = 3.48 kg. ÷ 3 months = 1.12 kg. @ 30 pt. | = 34 pt. |
| Flour = 4.05 kg. @ 11 pt. | = 44 pt. |
| Total monthly income effect | = 78 pt. |

LE 0.78 X 12 months ÷ 1114 (median household income) = 0.8%

12. See note 8.

13. Ibid

14. Ibid, Surveyed were a 5% randomly selected sample of all women registering for the project in 31 project centers (26 urban and 5 rural). Of the 1009 women sample, 198 were no longer in the project but were followed-up by social workers and interviewed, i.e., response was 100%, as all women selected for the sample were interviewed.

15. See note 3.

# CHAPTER SIX: EVALUATION

## I. Justification

### A. Reasons for Evaluation

An in-depth evaluation has been scheduled for fall 1982 of Egypt's PL 480 Title II program. Before any evaluation is undertaken, there must be specific and justifiable reasons for undertaking it. Usually evaluations are conducted to obtain important information which is needed for either one or a combination of the following reasons: (1) meeting the concerns of Agency senior staff or Congress; (2) formulating policy by gaining lessons to be used in designing or implementing similar projects elsewhere; (3) assessing impact; (4) making decisions concerning the continuation, expansion or reduction of the activity; (5) identifying ways to improve the projects.

### B. Formulating Policy and Meeting Concerns of Agency Senior Staff or Congress

One potential reason for conducting the scheduled in-depth fall evaluation is that it is one of a series being conducted by the AID/W Food for Peace Office. The series is designed to provide information for policy making, obtain useful lessons, and meet Congressional concerns. Though the present review does not answer all the questions, it provides most of the needed information. Therefore it does not appear that an in-depth fall evaluation can be justified on these grounds. Though the present review does not investigate the CARE Sinai Feeding project; it seems that whatever evaluative information is needed on this project can

be obtained more efficiently by a USAID social analyst than by an AID/W evaluation team.

C. Assessing Impact

Determining the impact of development activities is an important evaluation objective. As described earlier in this report, in-depth impact studies already have been conducted of the CRS School Feeding and CARE Family Planning projects. These studies contain more information on impact than could be obtained by a month long field evaluation effort. Any additional impact information which might be required should come from reanalysis of the data from these studies rather than from new studies. It appears that the scheduled fall evaluation will be able to provide only a limited amount of new impact information on these two projects.

Without weight chart information, any evaluation of the CRS/MCH project will have a very difficult time obtaining impact information. In-depth interviews with a sample of women beneficiaries might provide some recall information concerning possible changes in child consumption patterns and health/nutrition status. However, such information is bound to be highly subjective and potentially misleading because interviewed women might feel pressure to report progress when none was actually achieved.

Little information is presently available on the impact of the CARE Sinai Feeding project or the CRS Other Child Feeding project. The scheduled fall evaluation could obtain information on the characteristics of the target groups of these two projects and perhaps gain some insights on project impacts. However, it would not be possible to assess the nutritional impact of these projects.

Impact information probably would have to be limited to the perceptions and attitudes of beneficiaries and the income effect of the food distributed, which amounts to about LE. 12-16 for Sinai Feeding and roughly LE. 19 for Other Child Feeding.[1/] These two essentially welfare projects constitute about 12-15% of the Egypt Title II program, therefore obtaining some target group and impact information does not contribute very much to a justification for conducting the scheduled fall evaluation.

D. Decision Making

Important Title II programming decisions for FY 82 must be made during the summer of 1981 due to severe budget constraints. For example, critical decisions are now in the making on how and whether to change commodities in the MCH project, the largest Title II activity, as well as in the School Feeding project. This report seeks to provide relevant information as input to these decisions. However, the scheduled in-depth fall evaluation will be too late to contribute to these decisions.

The CARE/EFPA agreement is due to expire in January 1982. A decision concerning the possible continuation of this project is implied in the approval of the FY 82 AER. Approval of the AER for a full year's commodities implies continuation of the project. Approval of only one quarter's commodities implies no continuation. Since the AER level will be approved during the summer of 1981, information collected during the scheduled fall evaluation will be too late. The scheduled fall evaluation potentially could provide information for future decision-making; however, its timing in the fall after key decisions are made in the summer seems inappropriate. In conclusion, the scheduled fall evaluation

cannot be justified on the grounds that it will produce information that is needed for decision making.

E. Identification of Ways to Improve the Projects

This is one of the main reasons for conducting evaluations. Several suggestions for improving the projects are identified and discussed in this report. Certainly a more in-depth evaluation may add to or improve the suggestions made here but it is difficult to assess how significant such additions and improvements will be. The most important needs probably have been identified already, for example, the need to utilize weight charts in the CRS/MCH project and the need to target the CARE/EFPA project to potential new contraceptive acceptors. The CRS School Feeding project is operating efficiently and there is relatively little room for real improvement except for dropping the wheat-soy blend from the bread which will cut costs and make the bread more acceptable to the school children. Since the present review did not look closely at Sinai Feeding and Other Child Feeding, specific recommendations for improving these two small activities have not been specified and could be a useful product from the scheduled evaluation.

What is really needed is assistance in designing practical ways to implement the suggestions for improving the projects. This is more a project redesign and technical assistance activity than an evaluation activity. Consequently, technical design expertise in such fields as nutrition, nutrition education, and family planning are needed more than evaluation expertise. Assuming the GOE, the volags and, AID agree on the need for such technical assistance, it should be provided by appropriate technical offices

rather than by an evaluation office. The need for refining project designs, identifying resource needs, and assisting with implementation is not spread evenly across projects.

The biggest need is in the CRS/MCH project which is a complex activity and accounts for over half of the Egypt Title II program. Food distribution in the MCH program will almost surely not demonstrate impact on nutrition status until major design deficiencies are addressed: that is the effective institution of growth monitoring and an appropriate nutrition education component. As explained elsewhere in this report, bureaucratic and political not just technical problems have hampered improved design but the latter certainly could benefit from well-directed technical assistance (as determined in conjunction with CRS and MOH officials). Technical support may also be useful in specifying and directing the use of the food resource as a catalyst for improved MCH services. Several unanswered questions about how food operates as an incentive for beneficiaries also need to be explored, for example, which foods, what quantities, etc.

As mentioned above, the School Feeding project is operating efficiently and does not require outside assistance. If the Family Planning project is continued, some assistance might be useful in identifying and implementing new beneficiary selection criteria and upgrading the capacity of EFPA centers.

F. Conclusion: Is an In-Depth Fall Evaluation Justified?

The discussion above suggests that there is not a strong justification for conducting the scheduled evaluation in the fall of 1982. There appear to be two general reasons for conducting

the evaluation: (1) it can provide additional information (on target groups, perceptions of impact, and recommendations for improvement) for the Sinai Feeding and Other Child Feeding projects which are not covered in detail by the present review; and (2) it can supply some additional information to that provided herein on the Family Planning, School Feeding and MCH projects. These reasons are not compelling compared to the greater need for technical assistance, rather than evaluation, and the fact that the scheduled evaluation does not appear to be well timed to provide useful additional information for policy formulation, assessing impact or making decisions. An evaluation scheduled for FY 83 or later would appear to be more appropriate for meeting these information needs (provided the mechanisms to enable such an evaluation are set up now).

Any decision on whether or not to go ahead with the scheduled fall 1982 evaluation should be made only after carefully weighing the possible advantages and disadvantages. Both CRS and CARE as well as directly related Egyptian agencies should be involved in any decision concerning whether or not to conduct the evaluation. The present report provides some basis for making the decision by indicating what is currently known about the projects and what additional information might be gathered by an in-depth, external evaluation.

Though the authors do not recommend going ahead with the fall evaluation as scheduled, a draft scope of work for such an evaluation is annexed to this chapter because development of such a scope was one of the stated tasks of this review.

## II. Importance of Internal Evaluation

More important than the conduct of periodic external evaluations is the establishment of good internal evaluation systems. The Title II projects perhaps would benefit more from assistance with establishing internal evaluation systems than from an external evaluation. In fact, two of the projects (Family Planning and School Feeding) have rather sophisticated internal evaluation systems already in place. Perhaps, they could use some assistance in focusing these systems on key project objectives (at least "key" as perceived by AID). For example, the EFPA evaluation study data could be used to assess the affect of the food on gaining new acceptors instead of on increasing registrations at centers. At present, the MCH project does not have an adequate internal evaluation system primarily because weighing and the use of weight charts has not been established in the centers. Aside from being an excellent evaluation tool, effective use of weight charts has several other important uses: screening and selecting project participants; monitoring the health and nutritional status of children; and demonstrating to mothers the importance of good nutrition and health practices. Specific assistance to establish effective weight chart use (for future evaluation as well as other purposes) could be far more important to this project than an external, general evaluation.

## Annex: Scope of Work for Scheduled In-Depth Evaluations

One of the stated objectives of this program review was "to draft a proposed scope of work for the in-depth evaluation scheduled for fall 1982." Though upon completion of the review, the authors seriously question the need for a fall evaluation, a draft scope of work is provided here because it was identified as an important product of the review process. However, the presentation of this scope of work should in no way in interpreted to mean that the authors are in favor of the evaluation.

A. Objectives of the Evaluation

1. Assess impact (where possible - and going beyond impact information presented herein) using goals, purposes, indicators and methods contained in logical frameworks presented herein (or mutually agreed upon adjustments to these). Identify lessons for feeding programs elsewhere.

2. Make specific and general recommendations for improving projects (going beyond the suggestions provided herein) by analyzing project operations, investigating strengths and weaknesses, identifying resources needed and their sources; and designing specific actions to improve projects.

B. Key Evaluation Topics for Individual Title II Projects

1. CRS - School Feeding

There are no truly important evaluation issues outstanding for this project; however, consideration

might be given to reanalyzing MOE data to try to assess better the impact of school meals on attendance and examination performance. No field work is required.

2. CRS - MCH

Targeting: What criteria are now being used to select beneficiaries? How can the use of weight charts in MCH clinics be institutionalized? Site visits required.

Impact: Goal of improved (or even maintained) nutritional status cannot be evaluated practically without weight chart information. Subgoal of increased consumption is very difficult to assess without proper baseline data. Perhaps recall interviews with beneficiary mothers might reveal some useful qualitative information on achievement of project goal or purpose. Site visits are required.

Secondary Impact: Is food acting as a vehicle or incentive to bring women to MCH centers for critically needed health services? Is food being used as a programmatic resource -- i.e., as an input to which added inputs can result in delivery of the desired MCH package. Site visits are required.

Operation: What is the extent of late deliveries to centers, missed deliveries, and missed distributions to women? How are nutrition education and food distribution working in combination? Site visits are required.

3. CRS - Other Child Feeding

This is a small project so it does not warrant a large proportion of evaluation team time. However, some issues which warrant addressing include: (1) Are children served really needy? (2) Is the size of the program proportionate to the relative need of this beneficiary group? (3) Is the commodity mix and ration size appropriate given type of institutions, their meal patterns, etc? (4) Is the food well utilized? Are there any logistical bottlenecks? Some field work is required.

4. CARE - Family Planning

Impact: How have age specific parities of target group women (new acceptors) changed while in the project? How do they compare to appropriate Egyptian norms (control)? The latest EFPA survey provides the data needed for this analysis. Field work is not required?

Targeting: What can EFPA do to better target project (i.e., exclude previous acceptors)? Some site visits are required?

5. CARE - Sinai Feeding

Objectives: What is goal and purpose of activity? Do USAID,CARE and GOE agree on the goal? No field work is required.

Impact: Are goal and purpose being achieved? Are recipients as satisfied with the program under

the GOE as they were when the project was being administered from Israel? Field work is required. (Due to the special and sensitive nature of this activity, the evaluation team should proceed very carefully.)

C. Team Composition

The table below suggests the required and desired team skills for evaluating each of the projects. Of course, it is assumed that evaluation team members will have several of the required and desired skills. Though seven required and five desired skills are listed, the size of the evaluation should be kept to a reasonable number (perhaps 5 or 6) to avoid undue logical problems.

Beneficiaries at centers are open and quite willing to talk about the program. Their answers to questions appear straightforward and candid. It is extremely important that team have Arabic capability; use of interpretors seriously diminishes effective communication with beneficiaries.

| | CRS | | | CARE | |
|---|---|---|---|---|---|
| | SF | MCH | OCF | Fam. Plng | Sinai |
| 1. Social scientist who can analyze statistical reports written in Arabic - preferably native Arabic speaker | R | D | | R | |
| 2. Arabic speaker for meeting with center personnel and recipients | | R | D | D | R |
| 3. Nutritionist | | R | D | | D |
| 4. Quantitative social scientist experienced in research design and fertility analysis | R | | | R | |
| 5. Experience with Title II PVO Activities | D | D | D | D | D |
| 6. Effective team leader and coordination of transportation, clerical services, office space, etc. | R | R | R | R | R |
| 7. Report drafting expertise | R | R | R | R | R |
| 8. Experience with LDC family planning | | | | D | |
| 9. Experience with LDC primary education | D | | | | |
| 10. Social scientist experienced with attitudes, behaviours, motivations of peasant Egyptian women (probably Arabic speaker) | | R | | R | |
| 11. Economist | D | D | D | D | D |
| 12. Nutrition Education Specialist | | R | | | |

R = Required, D= Desired

## NOTES

1. Ration sizes can be used to estimate the income effect.

   A. Sinai Bedouin feeding.

   Flour: 19.5 kg/quarter X 4 X LE .11 = LE 8.58/yr.

   Bulghar: 9.0 kg/quarter X 4 X LE .15 = LE 5.40/yr.

   Oil: 1.5 kg/quarter X 4 X LE .30 = LE 1.80/yr.

   Total (roughly about 10% of Bedouin per capita income) LE 15.78/yr.

   B. Sinai Non-Bedouin feeding.

   Flour: 10.5 kg/quarter X 4 X LE .11 = LE 4.62/yr.

   Bulghar: 9.0 kg/quarter X 4 X LE .15 = LE 5.40/yr.

   Oil: 1.5 kg/quarter X 4 X LE .30 = LE 1.80/yr.

   Total (roughly 5% of target group per capita income) LE 11.82/yr.

   C. Other Child Feeding.

   ICSM: 2 kg/month X 12 X LE 0.50* = LE 12.00/yr.

   Flour: 3 kg/month X 12 X LE 0.11 = LE 3.96/yr.

   Bulghar: 1 kg/month X 12 X LE 0.15 = LE 1.80/yr.

   Oil: .45 kg/month X 12 X LE 0.30 = LE 1.62/yr.

   Total (about 6% of national per capita income) LE 19.38/yr.

*ICSM (Instant Corn Soy Milk) has no local equivalent. It is nutritionally similar to milk which costs about LE 2.50 per dry kilogram (LE .50 per liquid liter). However, it is often used like flour which costs LE .12 per kilogram. Here we've assumed a value of LE .50 per kilogram.

## LIST OF RELEVANT DOCUMENTS

(Excludes standard AID and PL 480 Title II documents such as CDSS, ABS, AER, Implementation Agreements, etc.)

General: (Pertaining to More than One Project)

Auditor General, "Catholic Relief Services (CRS) P.L. 480 Title II Programs and Section 204 Grants in Egypt," Washington, D.C., June 15, 1979.

Baker, Raymond W. "Rural Health Care" in Egypt's Uncertain Revolution Under Nasser and Sadat, Cambridge: Harvard University Press, 1978.

CAPMAS, "The Preliminary Results of the General Population and Housing Census 22/23 November 1976 in Egypt," Cairo.

Field, John Osgood and George Ropes, "Infant Mortality, The Birth Rate, and Development in Egypt," CU/MIT Health Care Delivery Systems Project, Monograph No. 1, May 1980.

Field, John Osgood and George Ropes, "Development in the Egyptian Governorates: A Modified Physical Quality of Life Index," Cambridge, Mass. - MIT Technology Adaption Program. January 1979. (Forthcoming, L'Egypte Contemporaine.)

Field, John Osgood and George Ropes, "The Influence of the Health System on the Recorded Incidence of Infant Mortality and Birth Rates in Rural Egypt," CU/MIT, Health Care Delivery Systems Project. Monograph No. 2, June 1980.

Institute of Medicine, Division of International Health. "Health in Egypt: Recommendations for U.S. Assistance" Washington, D.C.: National Academy of Science, 1979.

May, Jacques M. The Ecology of Malnutrition in the Far and Near East. New York: Hafner Publishing Col., 1961.

National Center for Social and Criminological Research and UNICEF, "Assessment of Children's Needs in Egypt: A National Survey," Cairo, 1974.

Nawal El Messiri Nadim, Rural Health Care in Egypt. Ottawa: International Development Research Center, 1980.

Patvardham, V.N. and Darby, Wm. J. The State of Nutrition in the Arab Middle East, Vanderbilt University Press, 1972.

World Bank, Some Issues in Population and Human Resource Development in Egypt, Report No. 3175-EGT, Restricted Distribution, May 12, 1981.

CRS - Rural Primary School Feeding

CRS, "Annual Report on School Lunch Program," Cairo, 1979, 1980, 1981.

Egyptian-American Survey Team, Basic Education in Egypt, Human Resources Management, Inc., Washington, D.C., August, 1979 (200+ pp.).

*MOE Local Evaluation Committee, Evaluation reports on CRS primary school feeding program. Three reports, one on physical characteristics of pupils and two on enrollments, drop-outs, absenteeism and academic performance, 1981 (in Arabic, draft).

MOE Local Evaluation Committee, "Report on the Achievements of WFP Assisted Project ARE 2046 'Primary School Feeding Programme in Rural Egypt,'" Cairo, October, 1978.

CRS - MCH and OCF

Allen, Stephen R. and Andrew Koval, "Food Aid for Supplementary Feeding: A Case Study from Egypt," presented at Conference on Interface Problems Between Nutrition Policy and Its Implementation, MIT, November 5-8, 1979.

Burkhardt, Robert; John Ossgood Field, and George Ropes, "Supplementary Feeding in Rural Egypt: A Summary Profile of the Health System in Action," CU/MIT Health Care Delivery Systems Project, Monograph No. 5, June 1980.

Catholic Relief Services "General Report on the Nutrition Research in Tant El Gezira, Akyad Degwa, Kafi El Ragulaat and Gezeret Al Ahrar Villages of El Kayyoubuja Governorate, Cairo, 1978.

CU/MIT Health Care Delivery Systems Project, "Results of the Health System Questionnaire Administered by the Ministry of Health, Arab Republic of Egypt at 132 Rural Health Centers and Units March-April 1978: A Reference Manual," Monograph No. 3, May 1980.

DS/N, "Workshop on Nutrition and Health in Egypt with Special Reference to Mothers and Children, Cairo,October 20-22, 1979," Washington, D.C.

DS/N, AID, "Arab Republic of Egypt: National Nutrition Survey," Washington, D.C., 1978.

DS/N "Arab Republic of Egypt: "Nutrition Status Survey II." (draft report by the Nutrition Institute, Ministry of Health), Cairo, March 13, 1981.

El Lozy, Mohammed, John Osgood Field, George Ropes, and Robert Burkhardt, "Childhood Malnutrition In Rural Egypt: Results of the Ministry of Health's 'Weighing Exercise,'" CU/MIT Health Care Delivery Systems Project, Monograph No. 4, June 1980.

*Ministry of Education

El Rihawi, Soheir and Awaad, Zeinub. "Proposed Nutrition Education Action Plan: Al Azhar Nutrition Project. Cairo, April 1981.

El Sayyad, L.M., Maternal and Child Health Services in Egypt, Cairo, 1980.

El Sayyed,Lofty, "Nutrition for Young Children and Foreign Food Aid: A Booklet for Workers in Mother-Child Health Units," Ministry of Health, Cairo (in English, revised version. 1981 in Arabic).

Mobarak, A.B., et al "Diarrhea Disease Control Study: Final Report on Phase I to USAID and WHO", S.R.H.D. Project, Ministry of Health, Cairo, April, 1981.

Nutrition Institute, Ministry of Health, "Arab Republic of Egypt Nutrition Status Survey II, 1980," Cairo, March 13, 1981.

Reddy, Saranja K and Guiney, J. Michael, Family Food and Nutrition Messages for Mothers: a Manual of Priorities for the Eastern Mediterranean Region, UNICEF/WHO, April, 1977.

CARE - Family Planning

Arab Republic of Egypt, Central Agency for Public Mobilisation and Statistics, Egyptian Fertility Survey, 1980, Cairo, March 1981

Burkhardt, Robert, John Osgood Field, and George Ropes, "Family Planning in Rural Egypt: A View from the Health System," Cairo University/MIT Health Care Delivery Systems Project Monograph #6, Cambridge, Mass., June, 1980.

EFPA, Booklet providing guidance for centers on operation of nutrition services/ family planning project (in Arabic), EFPA, 1979.

EFPA, "Reports of the Preliminary Results of the Social Pre-Project Survey," Cairo, EFPA.

Research and Evaluation Section, EFPA, "Post Project Evaluation: Evaluation of Nutrition Project Field Work Study to Evaluate Plan, Implementation and Benefits," Cairo, (forthcoming - 1989). (In Arabic)

Fahmy, Badrawy M., The Population Problem and Family Planning in Egypt. Cairo, Al-Ahram Press, March, 1981 (63 pp.).

Institute of Medicine, "Health in Egypt: Recommendations for U.S. Assistance," National Academy of Sciences, Washington, D.C., January 1979.