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EVALUATION OF TITLE II

FOOD FOR PEACE

IN GHANA

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Carolyn Weiskirch, USAID Food for Peace, Washington, project officer for this evaluation, served continuously as adviser throughout the process - from the earliest orientations through the preparation of the final report. Without her knowledge, efforts, and encouragement, the work could not have been accomplished. Similarly, the efforts of Nancy Fox, also of the Washington Food for Peace office, contributed significantly to the evaluation. Additionally, many officials of the Agency for International Development, especially health, nutrition, agriculture, and auditing, assisted with the orientation. The US Department of Agriculture also provided help.

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Ministry of Finance and Economic Planning
Ministry of Health
Ministry of Social Welfare
Ministry of Education
Ministry of Foreign Affairs

Similarly, the Regional Ministers, Medical Officers, Nursing Officers, Public Health Nurses, Community Health Nurses, Nutrition Technical Officers, Education Officers, Social Welfare Officers, and members of the staffs of the Ministry of Agriculture were important sources of information and assistance. District and local officials of all these ministries, as well as members of the District Councils, furnished valuable assistance. Ministry of Health hospital administrators and staff, malnutrition clinic staff, public health nurses and other technicians, community health nurses, matrons of nursing schools, and Ghanaian and contracted doctors in many health facilities were all of unusual help during the work and often provided information that could not otherwise have been obtained.

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religious officials, as well as the ordinary citizens of the cities, towns, villages, and farming areas were interviewed in the study. Not one refused an interview; indeed, they were open, friendly, and cooperative. They wanted to talk about their own affairs, the nutritional status, and the Food for Peace program. Those qualities of the Ghanaian people were of immeasurable assistance to the study. Additionally, because of their work in the countryside, many interviews were carried out with religious and lay persons from The Netherlands, East and West Germany, The Philippines, Spain, Italy, Great Britain, Ireland, Australia, Canada, India, Switzerland, Austria, China, Togo, and the United States. Their frankness and information were commendable. Further, their enormous dedication and concern for Ghana and its people were obvious.

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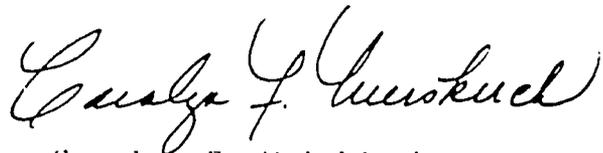
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PREFACE

The following evaluation of the Food for Peace Title II Catholic Relief Services program in Ghana is the first truly comprehensive assessment of those activities in the more than twenty year history of the program. In addition, this study represents the first attempt to measure the impact of the Ghana food aid program, including appraisals of the overall effect on the health of the recipients and on the general economy.

Carried out by the Catholic Relief Services as a part of its total organizational contributions, the Ghana Title II program consists largely of commodity distribution for Maternal Child Health, with smaller programs in Pre-school and School Feeding. There is a very small component of Food for Work.

Not a large program by Title II standards, the Ghana Title II program nevertheless plays an important role in providing supplements to many needy people in a food deficient country burdened with a rapid population growth rate and a high incidence of malnutrition. The Office of Food for Peace is most appreciative of the assistance given this team by the USAID Mission, Catholic Relief Services, and the Government of Ghana.



Carolyn F. Weiskirch
Office of Food for Peace

CHAPTER 1: INTRODUCTION

The Agricultural Trade Development and Assistance Act of 1954, Public Law 480, authorized a program of foreign food and assistance. Its programming emphasis has shifted during the years to reflect changes in US agricultural conditions as well as changes within different recipient countries. Its objectives were multiple but the food shortage of 1973-74 caused the sharpest changes in PL 480 in recent years, and focused on destitute people in poor countries and starvation deaths in the Sahel and Bangladesh. This gave emphasis to the Title II part of the law which authorized, in section 201, the President to...

determine requirements and furnish agricultural commodities on behalf of the people of the United States of America to meet famine or other extraordinary relief requirements; to combat malnutrition, especially in children; to promote economic and community development in friendly developing areas; and for needy persons and non profit school lunch and preschool feeding programs outside the U.S.

In section 202, subparagraph 6, it is again stated...

Distributing food commodities under this Title, priority shall be given to the extent feasible to those who are suffering from malnutrition, by using means such as (A) giving priority within food programs for preschool children and to malnourished children and (B) giving priority to the poorest region of the countries.

The assistance to the designated countries and the main administrative tasks related to that assistance are carried out by the Food for Peace office (FFP) of the Agency for International Development (AID) of the Department of State. The Department of Agriculture has many specific commodity responsibilities in the program. Agencies in these two departments, concerned with health and nutrition, contribute to the total effort.

In 1977, the Act was amended again to include requirements under section 408 as follows:

(C) beginning October 1, 1978, and at each five year intervals thereafter, the President shall submit to the Congress a comparative cross country evaluation of programs conducted under Title II and III. Such evaluations shall cover no fewer than five countries sampled from the developing regions (Asia, Africa, Latin America,

and the Caribbean) and shall assess the nutritional and other impacts, achievements, problems, and future prospects for programs under this title.

To execute the legislative requirements, AID cannot delegate its official responsibility for evaluation to a contractor or a consultant. The role of a contractor or consultant is to collect and analyze data, and formulate a set of tentative conclusions and inferences from the analysis for presentation to AID. The final evaluative judgments and decisions are made by AID/Food for Peace in Washington, DC.

It is within this framework of the legislative requirements that Development Associates, Inc., was chosen as the contractor to conduct the evaluation within the specified limits of the program in Ghana, one of the five African countries where evaluations were or are to be carried out.

Since Catholic Relief Service (CRS) carries out the Title II program in Ghana, this evaluation report is based on observations, inspections, interviews, and discussions with CRS representatives, USAID/Ghana, distribution center personnel and participants, the international organizations, and the agencies of the Government of Ghana, interested in the food situation in Ghana.

its objective is to give AID some of the elements that are necessary for the report required by Congress. It has used a constructive approach to the study and to the improvement of the understanding of the work of AID and the voluntary agency under the conditions existing in the field, and to give them opportunities to cooperate in overcoming the problems and maximizing the strengths of the program.

THE EVALUATION TEAM

Food for Peace/Washington and Development Associates selected the US members for the evaluation team to meet the specific needs of the study. The team leader had vast experience in many kinds of research in agriculture, development, education, labor, and management; those studies had been conducted in nearly every country in the Americas and some in Asia. His work with many kinds of research designs carried out in complex programs added that dimension to the evaluation. The nutritionist had had a wide variety of work with nutrition, health, and health program implementation and research. Her skills in designing questionnaires and surveys, and their utilization in the field, were of special importance to the study in Ghana. The logistics specialist had had ten years experience with Food for Peace programs in Africa and Asia. He had also monitored all the management tasks involved in the present evaluation.

Food for Peace/Washington and USAID/Ghana nominated two Ghanaian nutritionists to work with the team while on site. Both had extensive experience with nutrition programs and studies as staff members of Government of Ghana agencies. They also had worked in other African countries, advising and studying nutritional programs. Additionally, one spoke several Ghanaian languages and dialects, an important facet of the interview work.

The two Food for Peace staff members of USAID/Ghana provided logistical support for the entire effort, conducted most of the inventory inspections, and worked as interviewers throughout the study. One member had Food for Peace experience in The Philippines and in Ghana. The other had worked both for Catholic Relief Services and USAID/Ghana in the implementation and monitoring of this type of program. The latter also spoke several Ghanaian languages and dialects, again a valuable asset in this evaluation.

A staff member of the Nutrition Division of the Ministry of Health of Ghana also participated in several of the site studies. He had experience in the implementation, management, and monitoring of nutritional programs. He, too, spoke Ghanaian languages and dialects.

Although not a direct member of the team, an AID/Washington Food for Peace officer provided a great deal of guidance and assistance with the design and conduct of the evaluation. In addition to her management and monitoring work with the program, she had also participated directly in another African Food for Peace evaluation.

Too, and although again not direct members of the evaluation team, many other persons materially helped with the work. Many nurses and nutritional officers translated the interview questions for the participants into the local languages. That assistance was invaluable. The two USAID/Ghana drivers collected some of the prices in the markets; that enabled the other team members to monitor more sites that would otherwise have been possible. Several regional and district health officials, and a number of religious leaders of several demonimations, helped arrange interviews and other data collection by making contacts for the team. Similarly, officials of the Ministry of Finance and Economic Planning, Ministry of Health, Ghana Education Service, and the Department of Social Welfare prepared letters of introduction that facilitated the work. (See Appendix G for copies.) A Ministry of Health official reviewed the proposed design and the questionnaires, offering worthy suggestions for the improvement of both. The assistance of all these people contributed substantially to the completion of the tasks.

Finally, the director and several staff members of the Catholic Relief Services office in Accra provided orientation, documents, forms, and additional information (Appendices A, B, E) utilized in this study. The Growth Surveillance System charts (Appendix D), were indispensable to the research. USAID/Ghana furnished many materials and items of background information quoted extensively

herein. The Ministry of Health of Ghana contributed the Road to Health chart (also in Appendix D) and the instructions for its use.

OBJECTIVES OF THE EVALUATION

The general charge to the team was to conduct as complete an evaluation as possible within the time frame allotted. Within that general assignment, the work was operationally delineated as:

Management and Policy:

- Describe the nature of the policies, regulations, and programs of the several agencies that contribute to or detract from the nutritional, agricultural, and general economic development of the recipients and/or the nation.
- Examine the implementation practices involved at the national, regional, and local levels.
- Determine the perceptions and opinions about the administration of the programs.

Potential Nutritional Impact:

- Determine the number of recipients being served and the proportions of the served and unserved.
- Assess the contributions of the rations to the needed nutrition of the recipients in relation to the other foods consumed.
- Determine the acceptability and use of the commodities as foods or for other purposes and reasons for them.
- Calculate weight for age differentials from six month measurements.
- Determine the possibilities for substitutions for the provided nutrients if they are available to recipients.

Agricultural and other Economic Impact:

- Assess the contributions to and/or detractions from these impacts.
- Describe the community/regional facilitation or inhibitions to the potential impact.
- Suggest the potentials for impact from possible

modifications of the presently used elements of Food for Peace, other elements not now being used, or those of other programs.

This general report is thus expected to provide some quantifiable data on the status of Food for Peace in Ghana, on the contributions of the other agencies, and on the services used in the delivery of the commodities. Qualitative information from the observations and the opinions of the many actors involved in the program is used descriptively and in explanation of the quantitative results.

SAMPLING

Food distribution is conducted in all eight of the political regions of Ghana. Catholic Relief Services documents listed 412 distribution centers but many of those served out stations and subclinics in the nearby geographic area. The sample design called for a minimum of 42 centers in the study, selecting them in approximately proportionate stratifications based on: political region, rural-urban sites, program type, sponsoring agency, and number of recipients.

The conditions of the roads, the scarcity of vehicles, and the limited time for the field work (3 weeks) caused several changes in the sampling design. The rainy season had begun in the southern half of the nation, making it imperative that only heavy duty vehicles be used for portions of the trips. USAID/Ghana was severely limited in available vehicles because of the difficulty of obtaining spare parts and carrying out the repairs. Additionally, a shortage of gasoline made the provision of that necessary element difficult at best and sometimes impossible.

Consequently, in concert with USAID/Ghana, several important modifications were made in the planned sample. The Northern Region, and portions of the Western, Brong Ahafo, Upper, and Ashanti Regions had to be eliminated. While comparable sites in most of those areas were found in the territory that could be surveyed, the loss of the entire Northern Region was a seriously limiting sample problem. To reduce the road travel, the Upper Region was surveyed via commercial flights and a rental car from the nation of Upper Volta. In essence, then, transportation had to be considered and except for the loss of the Northern Region, the sites were chosen in substantial accord with the other requirements for a representative sample.

The final sample contained 55 distribution centers, with about 25% of those conducting distribution at the time of the study. The extra sites were needed to obtain adequate coverage by type of program sponsor and type of program offered. (The areas covered by the sample, including the out stations served by the centers, are indicated on the map of Ghana with the approximate

location of the CRS distribution centers in Graphic I.)* The Government of Ghana agencies were responsible for the management of about 70% of the total centers in the country: that proportion was maintained in the sample. Centers sponsored by religious groups, and combinations of those with Ministry of Health/Ministry of Education, accounted for 25% of the sample. The remaining 5% was managed by other organizations.

The sites were chosen in approximate ratios according to the number of recipients listed on the distribution lists. A few sites had increased the number of recipients sufficiently to place them in another size category. Since those new numbers would also have changed the numbers in the several size categories on the original list, no untoward biasing by size was expected. Maternal Child Health-Child (MCH) programs, school feeding, and other child feeding programs were chosen in about the percentages they appeared on the lists. One unlisted school feeding and three other child feeding programs were found in the field as extra services of MCH centers. These were added as the field work progressed. The incidence of the day care centers increased slightly above the projected percentage, but probably stayed within proportions of the existing programs of that type.

In summary, then, the final sample conformed generally to that proposed except for the described limitations. General information suggested that the areas not covered were similar to some of those within the sample but no verification of that could be done; this report does not directly nor by inference cover those.

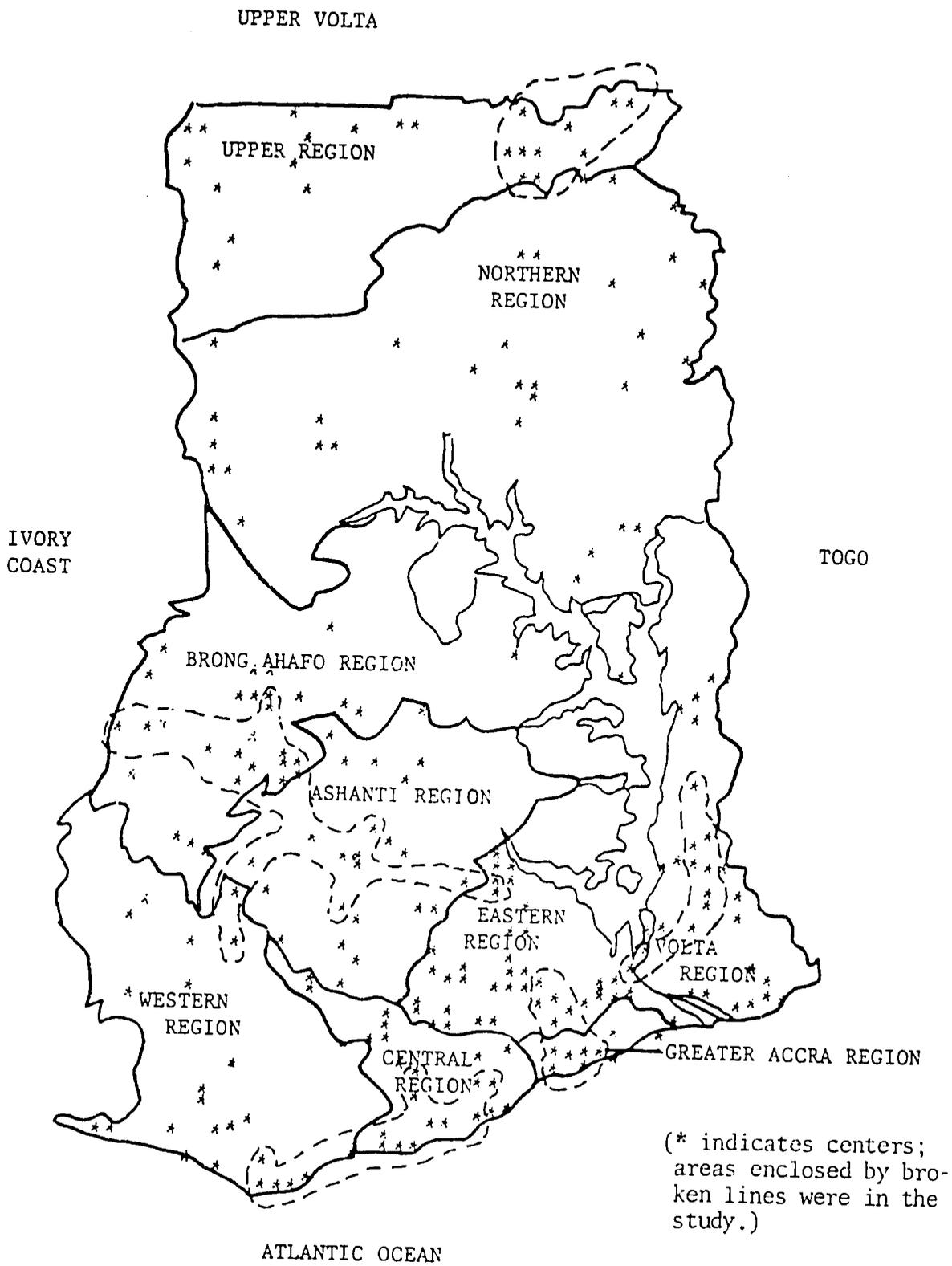
INSTRUMENTS AND PROCEDURES

Each of the instruments utilized in this study was designed to probe for the specific information needed with each audience; since USAID/Ghana already had an inspection report form, that was incorporated to serve that same purpose in the evaluation. (All instruments are included in Appendix F.) In so far as possible, the questions were designed for direct quantification. Opportunities to give explanations of each item were provided via open ended questions to ensure that the context of the replies was understood.

Two site questionnaires were designed. The Field Site Questionnaire was used when the full operation of a center could be studied. The Brief Site Questionnaire was utilized when the personnel of a center was available and the records could be examined, but when the distribution did not take place during the monitoring. The USAID Inspection Report was completed with either site form

**More than one center was located where some asterisks appear on the map.*

Graphic I: Evaluation Sample Areas within the Distribution Centers and Out Stations Served



(* indicates centers; areas enclosed by broken lines were in the study.)

so long as the tally cards and the physical inventories could be reconciled. The Opinionnaire was administered to all staff members present at the time of the study, either for the complete or the brief site questionnaires.

Participant Surveys were administered when the MCH-Child recipients were on site for the operation of the clinic or when they could be located in the immediate area. A function of that instrument was the determination of the ways the foods were used within the context of the general food preparation for the family. Twenty-four hour recalls were employed for the latter information. The Opinionnaire was also obtained for a sample of the mothers present at a clinic. Although both these instruments are in English, few were administered in that language during the interview; they were conducted in the following languages and dialects: Ga, Akan, Twi, Cherepon, Fanti, Frafra, Kusasi, Kasena, Hausa, Anlo and Northern Ewe, and Sewfi. Team members who spoke those languages and dialects interviewed the recipients directly when possible. Nurses and nutrition technical officers, working directly with a team member, translated for the mother in the other cases.

The growth monitoring data were collected in several ways. In those clinics and hospitals with in-house individual records, those were utilized. In two instances, officials were conducting special studies and their accumulated records were made available to the evaluators. Some distribution sites did not preserve individual child records in the clinics; in those, the mothers' copies of the individual child records were reviewed. Many clinics also had copies of previous Growth Surveillance System (GSS) master charts in their files and those were employed in the determination of percentages of children at the different percentile weight categories. The Growth Surveillance System individual child records and the Road to Health charts were encountered in some study sites. Either one was accepted. A few utilized the pounds form of the GSS charts; those were converted to kilograms for this study.

The Market/Community Surveys guided the collection of information on local salaries and wages, and on the prices of the common and supplementary food items in the markets. When the first market survey was being conducted, it became evident that the prices quoted were higher for the US members of the team than for the Ghanaians; thereafter, all prices were obtained by the Ghanaians when possible. Estimates of income earned by non-salaried community people (especially business people and farmers) were needed for the comparative purchasing power portion of the study. It became evident, however, that the replies were of little value; that item was eliminated from the survey and no data on those incomes are presented in this report.

The number of completed instruments was as follows for the entire evaluation:

| | |
|---------------------------|------|
| Field Site Questionnaires | 34 |
| Brief Site Questionnaires | 19* |
| Inspection Reports | 48 |
| Participant Surveys | 59 |
| Opinionnaires: Staff | 67 |
| Participants | 37** |
| Market/Community Surveys | 42 |

Growth monitoring data were collected in 18 sites with varying numbers of children depending upon the method utilized, the recipients of the center, and the number of children with records for a six months period.

All of the interviews were conducted privately (with the exception of those where translations were involved) to guarantee anonymity and thus maximize the veracity of the responses. No unusual events occurred; the interviews were granted willingly and openly, lending credence to the information gathered.

A great many other interviews were conducted with Government of Ghana officials in the national, regional, and district offices. Additionally, Catholic, Anglican, and Presbyterian national and diocesan authorities were surveyed. Local priests, brothers, nuns, and ministers of these and many other religious organizations were incorporated into the study sample. Representatives from international organizations and agencies of other countries were also interviewed on certain aspects of the evaluation. In all of these cases, a general framework to guide the interview was used but their concerns varied so widely that no formal instrument was utilized; narrative reports on the interviews were prepared.

Data contained in the Catholic Relief Services 1980 study (19) made possible by a grant from AID/Washington were also employed in the present report. In addition, comparative and/or supplementary information was incorporated from studies completed by two University of Ghana students (3,4); the Medical Mission Sisters in Ethiopia (79); the Ethiopian Nutrition Institute (36); and other evaluation reports (25, 69, 79) were utilized. All of these were important to the presentation and interpretation of the field collected results by the team.

**Two narrative reports were prepared on the Food for Work interviews since their operations did not conform to those of the other program types.*

***Because of the pressure of the work during the clinic operations, some mothers would have been unduly delayed had both the participant surveys and the opinionnaires been administered; the latter were eliminated in those cases.*

The tabulation of the replies and analyses were carried out in the San Francisco, California, office of Development Associates with assistance from the headquarters of that company in Arlington, Virginia. Only descriptive statistics were utilized since comparisons across sets of responses would have added little to the understanding of the Food for Peace operations. A draft of the report was prepared in the San Francisco Development Associates office and submitted to the project officer in the Food for Peace office at USAID/Washington. That office, in addition to making suggestions for improvement on the draft, supplied copies for suggestions and comments to USAID/Ghana, the Ghanaian team members, and to Catholic Relief Services. Development Associates prepared the final edition of this document after the comments received by the deadline were reviewed.

LIMITATIONS

The sample loss of the Northern Region and some other areas that might have been different, has already been noted. Additional growth monitoring data would also have been helpful in surveying that aspect of the program. A gap in the calculation of the losses of commodities between the shipments from the United States and the receipt of them by the distribution centers was hampered by the lack of records and/or their complexity when viewed within the time frame of the evaluation; the lack of that information is regretted and USAID/CRS officials are urged to make that portion of the study in order to effect improvements in the delivery system.

A larger team and/or more time would have allowed the collection of more information from the recipients in the program. While the random sample appeared to have been satisfactory for the purposes of this study, in those sites where no participants were available, more specific information on that site might have improved the evaluation.

Despite these limitations, Development Associates presents the report with confidence that it portrays the general conditions of the program in Ghana and most specifics on most aspects of the evaluation. Except as directly indicated, no substantial deficiencies in the data and other information have been encountered. The report is therefore submitted with the expectation that AID/Washington, USAID/Ghana, and Catholic Relief Services can effect improvements in the operations that will enhance the nutrition and thereby the health of the malnourished in Ghana.

CHAPTER II: GHANA - THE SITE OF THE STUDY

The Republic of Ghana, formerly called Gold Coast, was successively occupied by Portugal, Holland, and Great Britain. The British instituted a system of indirect rule in the 1920s, with half the leadership held by the English and half by those in the traditional chieftdom positions. In 1947, a United Gold Coast Convention was held to lead toward independence. In 1951, a cabinet composed of eight Africans and four British was formed. Dr. Kwame Nkrumah became prime minister in 1952, and in 1954 the remaining cabinet posts held by the British were filled by Ghanaians. The only outsider was the head of the cabinet.

On March 6, 1957, the Gold Coast became an independent state and was renamed Ghana after one of the ancient Sudanese empires that flourished between the fourth and tenth centuries. On July 1, 1960, Ghana became a republic within the Commonwealth of Great Britain. Dr. Kwame Nkrumah was the first president.

On February 24, 1966, the armed forces and the police overthrew the government. A National Liberation Council, formed after the coup d'etat, administered the country. A civilian government, headed by Dr. K. Busia, took control after the general elections of August 29, 1969. The armed forces took over the government again on January 13, 1972.

In October 1975, the military regime was recognized and a Supreme Military Council was created to assume executive and legislative authority. In June 1979, the Council was overthrown by young armed forces personnel. An Armed Forces Revolutionary Council was formed, headed by J. J. Rollings. This Council ruled for only three months, handing over the powers to a civilian government led by Dr. Hilla Limann as the executive president in August 1979. Dr. Limann has been in office since that time. (59)

GEOGRAPHY AND CLIMATE

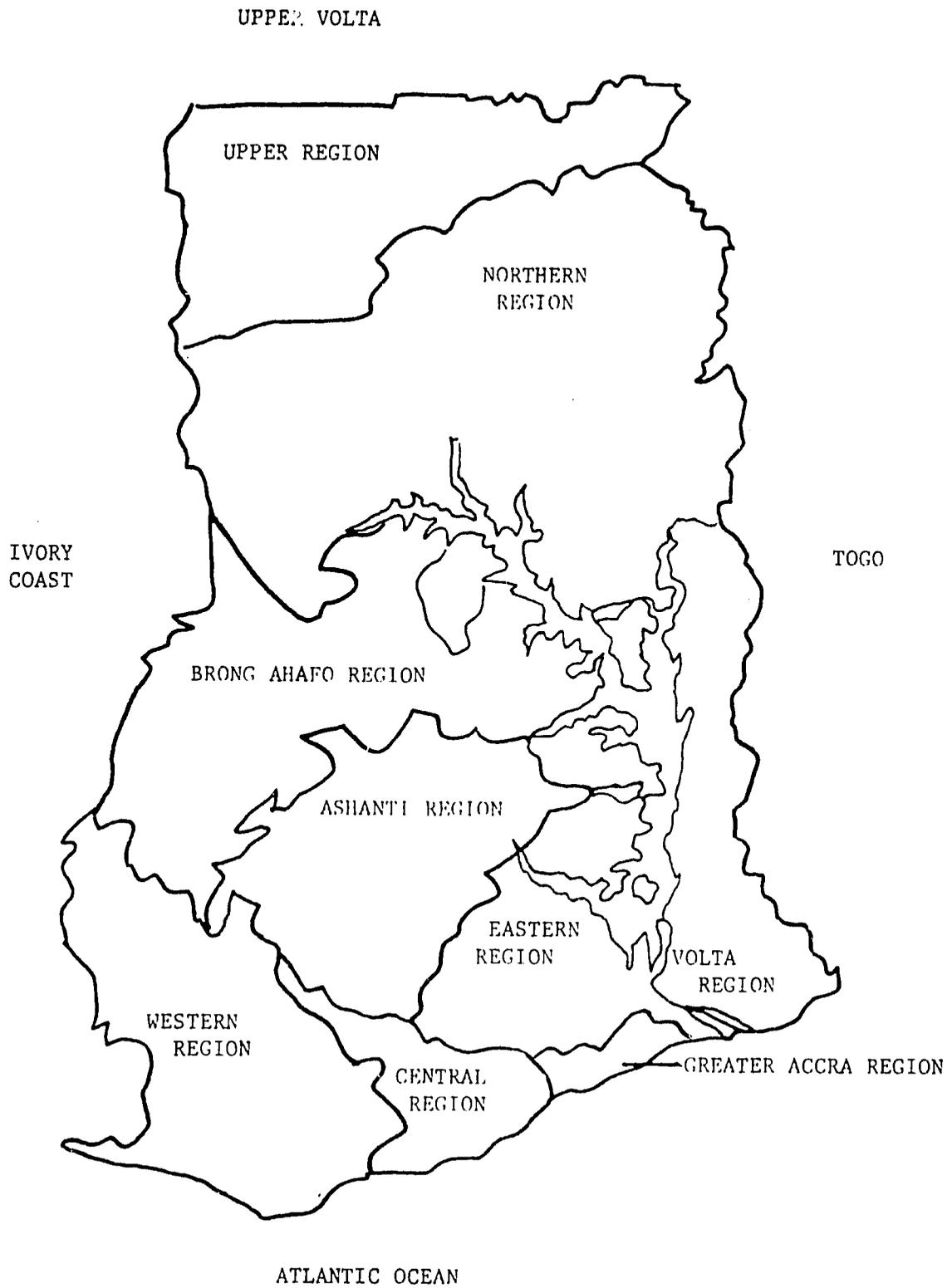
Ghana lies on the southern side of the bulge of West Africa (see the inset map) with its coast facing the Gulf of Guinea of the Atlantic Ocean.

It shares borders with Ivory Coast on the West, Upper Volta on the North, and Togo on the East. Accra, the capital, is on the east central coast. The country is divided into nine administrative regions, each with its regional capital; Accra serves as both national and regional capital for the Greater Accra Region.

(See Graphic II.)



Graphic II: Administrative Map of Ghana



Much of Southern Ghana is comprised of low plains with a coastal strip of savannah of flat or slightly rolling land, including the Volta delta. The tropical rain forest occupies the southwestern portion of these plains. The central eastern half of the nation is occupied by the Volta basin; Lake Volta, one of the world's largest man made reservoirs, lies within this basin. North of the low plains and west of the lower half of the Volta basin lie the Ashanti uplands, sufficiently high to cause the moisture laden winds from the Atlantic to deposit substantial rainfall. In the north and northwest are the high plains with elevations between 500 and 1000 feet. Although the annual rainfall is listed as 40-50 inches for this area, it also suffers most from periodic droughts. The Akwapim-Togo mountain range is found in the eastern part of the country and is primarily covered by deciduous forests.

The climate of most of the nation is warm (76-98°F) and humid (65-95%); the exception is much of the Upper Region and the contiguous section of the Northern Region, in which the humidity is lower and the rainfall less. The heavy rains are expected from May to July and lighter rains from then until late November. Many areas experience periods when the rainfall is insufficient for planting even though the annual total would appear to be enough for most crops.

THE PEOPLE

The population of Ghana, with an estimated 3% increase per year, is one of the fastest growing in West Africa. Census and estimate figures for the past 60 years emphasize that growth:

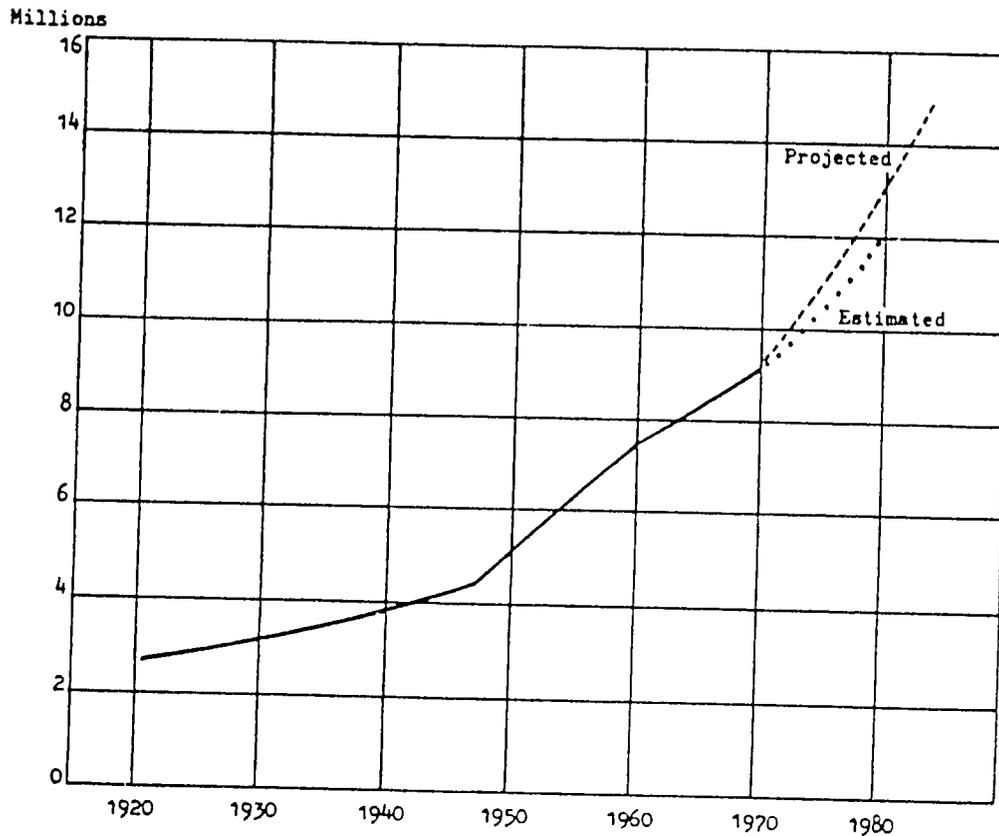
| | |
|------|-------------|
| 1921 | 2.0 million |
| 1960 | 7.1 |
| 1972 | 9.5 |
| 1981 | 12.0 |

It should be noted that the latter figure, 12 million, was disputed by some authorities who insisted that the population was "just about 11 million." (See Graphic III.)

Differences in explaining why the growth rate had slowed down also existed. The "exodus of blue and white collar workers and professionals" was always mentioned and some informants expected "that the national family planning campaign had had some effects."

The last analyzed census, 1960, reported 49.5% females and 50.5% males; some of the male population was attributed to heavy immigration from nearby countries. Some outward migration has been experienced in the last few years so the present balance between males and females is unknown. (See Graphic IV for the population pyramid from the 1960 census; note that the pyramid contains 6.7 of the 7.1 millions reported.)

Graphic III: Measured, Projected, and Estimated Population Growth in Ghana from 1921 to 1980*

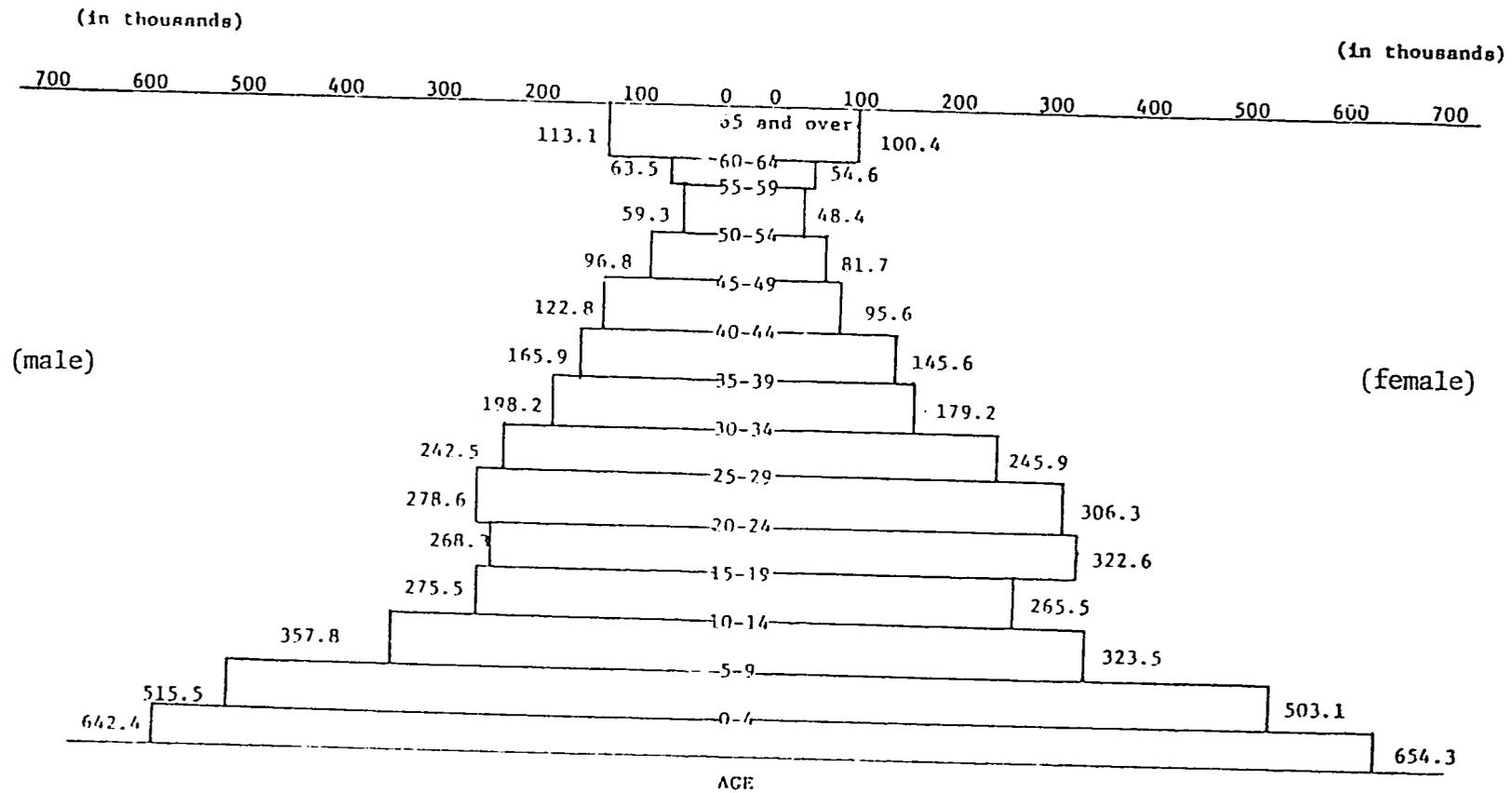


*Adapted from Ghana Ministry of Health and United Nations publications; original source: World Population Prospects as Assessed in 1968, New York, 1973.

More importantly for the present evaluation, the 0-4 year olds numbered in the pyramid made up 19.3% of the population. If that percentage still holds, that age group would comprise 2.3 million of the presently estimated 12 million inhabitants. Some 44.5% of the 1960 population was under the age of 14, resulting in an enormous burden for the employed adult population.

The people are almost entirely African in origin; only a very small percentage is European and Asian. The Africans were said to come from about 50 tribes, many of them immigrating from other parts of the continent. The major languages are the Akan group

Graphic IV: 1960 Population Pyramid for Ghana



Source: Adapted from Republic of Ghana, Census Office, 1960 Population Census of Ghana, III, Demographic Characteristics, Accra, 1964, pp. 3-7.

(Ashanti, Twi, Fanti, and Akwapim), Dagbani, Ewe, Ga, Hausa, and Nzima. English is the official language and is a common tongue among many urban dwellers and among the professionals throughout the country.

Ghana has a dual social, and to some extent political, structure traditional societies, laws, and customs exist with the national constitutional organization. The statutory society is more prevalent in the south and the urban centers; the traditional is more important in the rural and northern portions. Many Ghanaians, of course, participate in both systems.

In 1960, religious affiliation was reported as 43% Christian, 38% animist and traditional religions, 12% Moslem, and 7% who claimed no affiliation. Roman Catholics made up about one-third of the Christians. A high proportion of the northern peoples is Moslem and recent figures given by that religion indicated their percentage to be much higher than that listed for the 1960 census.

EDUCATION

In 1960, the government estimated that 21% of the population over age ten had attended some school. In 1961, education was made free and compulsory after age six but the duration of required attendance was not set. Following the compulsory education legislation, the enrollment in primary, middle, and secondary schools was said to have increased from 600,000 to about 1.47 million by the end of the decade.

Complete statistics on school participation were not available at the time of the evaluation but the 1978-1979 primary enrollments were provided, indicating that some increases had occurred. Table 1 contains the numbers by region and for the entire country, listing about 1.3 million in primary schools. Apparently earlier estimates that "twice as many boys as girls were being educated" were somewhat alleviated since in 1978-1979, boys made up only 54% of the total primary pupils.

While the number of years of school attainment could not be ascertained, some indications could be gleaned from the same table. For the country as a whole, the sixth grade figures were about 58% of those enrolled in first grade. Note, however, the considerable differences among the different regions. In Greater Accra, the sixth grade was 83% of the first grade, while in the Northern Region the proportion was 33% and in the Upper Region it was 34%.

A second problem was highlighted in the evaluation sample schools: attendance varied a great deal from one day to the next, especially during the farming season. The latter appeared to affect the upper elementary and middle school pupils the most. In one sample middle school, for example, only 27 of 118 enrolled middle school students were present; the absentees were said to be helping with the farming or caring for younger children while the

mothers worked on the farm. Illness and hunger were also reported to affect attendance. Almost every school noted that attendance was higher when food was served. The same phenomenon was described by the day care center managers. Except for the counts made on the day the schools were visited, the reported attendance could not be verified. No records were available.

Table 1: 1978-1979 Primary School Enrollment by Region, Sex, and for the First and Sixth Grades*

| Region | No. Schools | Total Pupils | Boys | Girls | First Grade | Sixth Grade |
|---------------|-------------|--------------|---------|---------|-------------|-------------|
| Greater Accra | 537 | 124,704 | 62,722 | 61,982 | 22,369 | 18,527 |
| Volta | 1089 | 162,568 | 91,450 | 71,118 | 35,775 | 21,822 |
| Eastern | 1427 | 244,199 | 125,485 | 111,346 | 51,964 | 32,331 |
| Central | 748 | 137,646 | 79,298 | 58,348 | 29,913 | 18,009 |
| Western | 749 | 126,275 | 72,684 | 53,591 | 30,200 | 15,362 |
| Ashanti | 1375 | 263,495 | 142,841 | 120,654 | 54,906 | 35,405 |
| Brong Ahafo | 848 | 128,787 | 72,866 | 55,931 | 29,927 | 15,237 |
| Northern | 451 | 55,897 | 36,982 | 18,715 | 16,024 | 5,344 |
| Upper | 404 | 52,164 | 33,788 | 18,376 | 15,072 | 5,188 |
| TOTAL | 7628 | 1,295,735 | 718,116 | 570,061 | 286,150 | 167,285 |

*Adapted from *Digest of Educational Statistics, Planning Division, Ghana (58)*.

Primary education is complicated by the fact that a high proportion of those entering first grade do not speak English. Most of the teachers in the evaluation sample spoke one or more of the languages of the area and were able to help children by explaining concepts in those languages and even teaching some subjects in them. Great variance in English proficiency was seen in the schools; some appeared to be quite proficient by sixth grade and others still could speak only small amounts of that language. Since the tests for moving from one level to another are in English, some portion of the dropouts is no doubt due to this factor.

Secondary education and the number of girls enrolled were said to have increased substantially during the last decade although no statistics were found. Attendance was also reported higher than for primary and middle schools. Vocational and technical education has been made available to many students, some within the secondary schools and some in separate institutions. Some students also enter health care or teacher training at some point after middle school; these two professions have attracted large numbers of students in the last ten to fifteen years.

Higher education is well organized and imparted in three institutions: the University of Ghana in Legon and with some courses offered in Accra, the University of Science and Technology at Kumasi, and the University College of Cape Coast at Cape Coast. The Ghana Medical School serves that profession. The estimated 7000 students are enrolled in a wide variety of the usual university curricula. Additionally, many Ghanaians study in England, other parts of Europe, other African countries, the United States, and Canada.

HEALTH

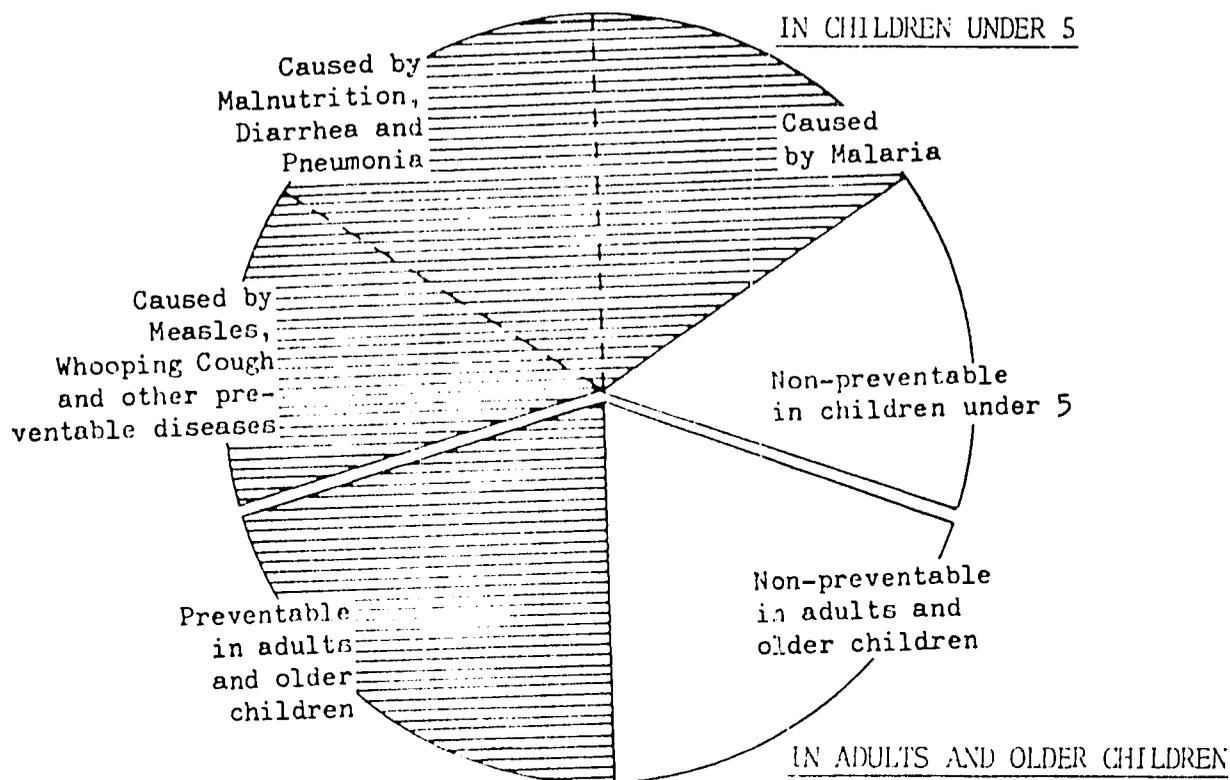
In recent years, the Government of Ghana has deliberately chosen to place more emphasis on training staff and locating them in the field. While some new clinics were built, the existing facilities suffered from insufficient maintenance. Too, some health statistics were not collected, analyzed, and/or reported. Although those reported in this evaluation came from a variety of sources and from differing periods, it was the opinion of the professionals in the capital and in the regions that the previously published figures on disease, malnutrition, and mortality have changed little for the country as a whole. Some decreases were cited for the urban areas but in many rural zones, and especially in most of Upper Region and portions of Western and Brong Ahafo, some increases had been experienced.

Analyses of the 1975 visits to all out patient facilities in Ghana (66) give an indication of the prevalence of the major diseases in the nation. Malaria, gastroenteritis, bronchitis, upper respiratory infections, abdominal pain, skin infection, and measles were the most frequent diseases diagnosed from the visits. All of these were frequent throughout the several regions. In addition, specific areas of the country had greater than normal incidence of tuberculosis, cholera, schistosomiasis, trypanosomiasis (sleeping sickness), onchocerciasis (river blindness), and leprosy. The immunization campaigns were credited with the near eradication of yellow fever and small pox, and with reducing measles, diphtheria, and typhoid from their earlier incidence.

Continued or increased disease frequencies were generally blamed on unsafe water for drinking and cooking, inadequate waste disposal, and more recently, on the scarcity of vaccines and medicines. Many professionals noted that the increased number of

health clinics, especially through the site and mobile community health posts and out stations, had, through health education, immunization, and early diagnosis, been influential in keeping the diseases and their consequences from being greater than they were.

Graphic V: Preventable Deaths per Year in Ghana*

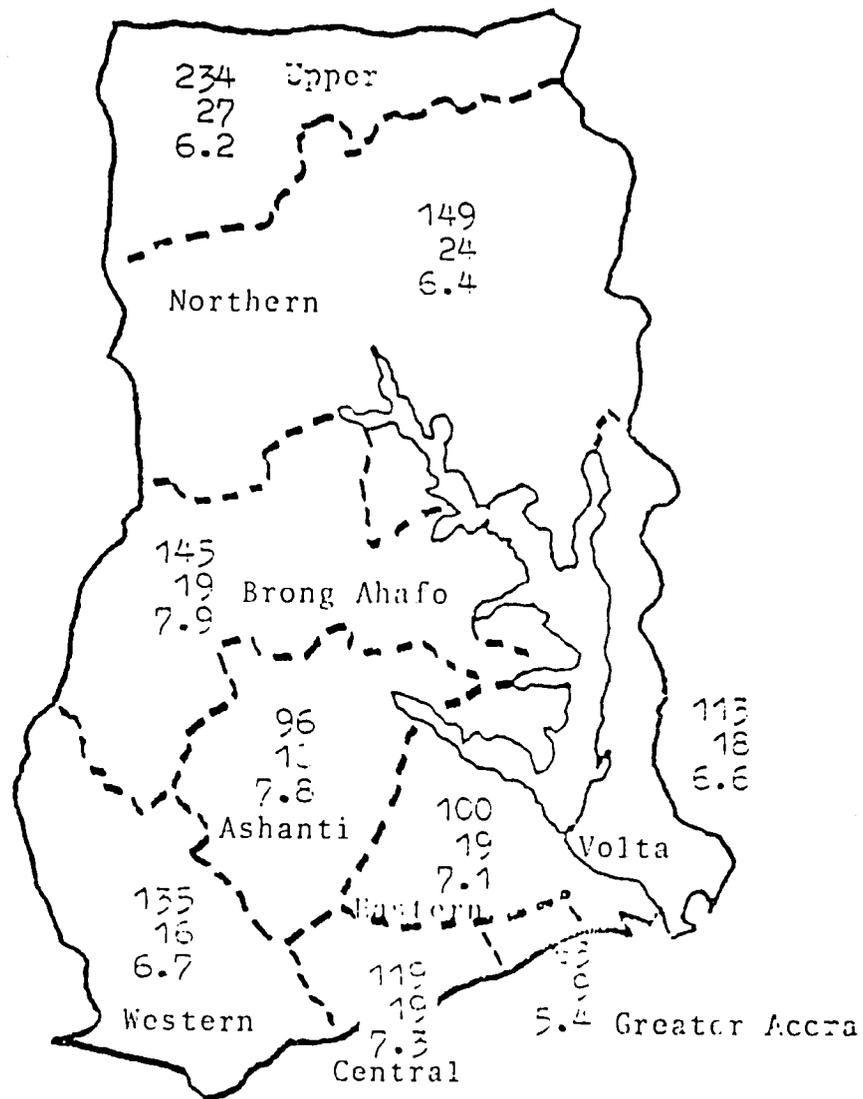


*From S. K. GAISIE, Legon, University of Ghana as reproduced by the Ministry of Health in 1977.

Graphic V further emphasizes the need for increased health care in Ghana and, concurrently, for greater attention to the nutrition and the lack of immunization; often the two were in interaction, especially in the case of measles, diarrhea, pneumonia, and whooping cough. The importance of improved nutrition in these children is evident.

The health problems of Ghana are not uniform across the nation. As already noted, the harsh weather conditions and the high population density of the Upper Region, coupled with transportation problems, under and unemployment, and the scarcity of foodstuffs in the markets, make this area particularly vulnerable. Graphic VI, which shows an infant mortality rate for the Upper Region of 234, illustrates how much more severe the health problems are there in comparison to the rest of Ghana.

Graphic VI: Health Indicators for Ghana by Region*



Key: Top figure: infant mortality rate (122 for Ghana); middle figure: crude mortality rate (19-20 for Ghana); lower figure: total fertility ratio (expected average number of children born per woman of childbearing age) (6.9 for Ghana).

*From: S. K. GAISIE, Legon, University of Ghana, 1968-1969, as reproduced by the Ministry of Health in 1977.

Greater Accra, the national center, has the lowest infant mortality rate, 63. The Ashanti Region, with 96, and the Eastern Region, with 100, are also relatively low; the rates in the Volta Region, 113, and the Central Region, 119, are not much greater. The other three regions - Western, 135; Brong Ahafo, 145; Northern, 149 - merit special note since within those regions, certain areas have much higher mortality rates than the region as a whole. The extreme northern and the western portions of the Northern Region, the northern and eastern parts of Brong Ahafo, and the western half of the Western Region all show very high rates of disease and related health problems.

On the other hand, the Ministry of Health officials pointed out that in general the towns and cities in all the regions suffered lower rates of infant mortality, malnourishment, and general health problems than do the rural areas. The full employment rates are considerably higher in the urban areas, foodstuffs are more plentiful in the markets, and health care facilities are more immediately available. Educational attainment, too, was reportedly higher in urban areas, which should also have an effect. The interviewed regional medical officers emphasized that those rural areas that had been served by community health posts, if statistics for them could be isolated, would also show lessened disease, malnutrition, and mortality, except perhaps in the Upper Region where the entire population/food supply problems are so acute that health care has a diminished impact. Doctors and nurses that have served villages for an extended number of years agreed with that judgment; several years of health care and health education generally have made a difference.

Regional, district, and local health officials unanimously agreed that the distribution of the commodities from the Food for Peace program was necessary. Almost all of them, however, qualified their endorsement in some specific ways:

- In every distribution center there are people that truly need the assistance.
- In every distribution center there are people who do not need the commodities for good health.

The news about US budget cutbacks had reached Ghana and there was a considerable concern that the Food for Peace program in Ghana would be among those curtailed or eliminated. Additionally, they were concerned about the nutritional impact portion of the present evaluation, worried that as with several previous studies, the weight gains of children receiving the commodities would not be significantly different from those not receiving them.

Detailed explanations of the "no significant gain" phenomenon were offered by several officials:

- Most of the centers distributing the commodities have several years' history of offering general health care, vaccinations, and

nutrition education along with the commodities; the combination is likely to have "evened out" some of the differences.

- The addition of the foods to the diets of normal and near-normal weight children is unlikely to substantially increase their weights.
- The dilution of the effect of the foods through the high proportion that feed them to the entire family makes the real portion going to the child very small.

These same officials showed, or arranged to show, records on seriously underweight children to demonstrate that those did gain significantly when they received and consumed a high proportion of the foods. They concluded from these records that:

- Seriously underweight children benefit a great deal from the Food for Peace commodities.

Occurrences of the three conditions cited by the health officers for the "no significant gain" were verified by the evaluation team, as will be shown in succeeding chapters. Their conclusion, too, was largely substantiated, although the addition of the European Economic Community milk and formula supplements clouded the effects of the Food for Peace commodities. Both were, for the most part, supplied through the good offices of the Catholic Relief Service; the combined effects were salutary.

ECONOMICS

Ghana's economy is mainly agricultural, with farmers making up about 60% of the work force. Cocoa, the main cash crop, accounted for over two-thirds of the export earnings as well as a large part of the government revenues. Livestock, rubber, bananas, cotton, sugar cane, citrus, and several food crops comprised the remaining agricultural products. African palm oil has increased substantially as a cash crop during the recent decade.

Bauxite and gold are mined and much of both is exported. Some oil is produced in the coastal region and exploration continues. Light manufacturing and the processing of food products make up most of that economic sector. The huge hydroelectric dam on the Volta River gave Ghana a plentiful supply of that energy.

Employees of the government agencies were said to make up the second largest group of workers after agriculture. Business and trades related to businesses were listed as third. Different

percentages were found, depending upon whether market women were included as "business" or whether they were considered as part time contributors in a family in which the man was counted as a farmer, government employee, or some other occupation.

Formerly, a system of highways, roads, and some railroads gave the nation a solid transportation structure. Communications were also relatively well developed with telephone and radio facilities. The lack of investment in repairs and expansion during the past several years has brought about a considerable deterioration to all these systems, and thus to the economy.

Substantial, detailed reports on the economy of Ghana, written by Government of Ghana, USAID, and independent authors, are included in the bibliography appended to this report. Those should be consulted for changes and trends, as well as exact statistics. The purpose of this section in this report is to lay a general groundwork for understanding the role of Food for Peace and other donated commodities to the nation as a whole, to the families receiving them, and to the children that are the principal objects of the Food for Peace program.

A major factor in the economy of Ghana, and of primary concern to the government, is the rate of inflation. The present and past governments have expended a great deal of effort to control the buying and selling of goods and services, including government intervention. These have included buying locally produced goods and releasing them at controlled prices onto the market, strict controls on imports, and keeping the minimum wage and government salaries as low as possible. Despite these efforts, the cost of many goods and services has risen exponentially. Quotations on the inflation rate varied a great deal, depending perhaps on which goods and services prices were examined. Conservative estimates were as low as 100% during the past five years; some estimates went as high as 500%. The salaries of workers and professionals had by no means increased at the higher rate. The cost of food appeared to have approached it. Some interrelations between these two will be demonstrated in the succeeding sections of this report. The official government exchange rate was set at 2.75(¢) to 1 US dollar. Verified street transactions were at about 25:1 at the beginning of the study but had risen to about 30:1 by its conclusion (the dollar rose in value on the world market during that time, accounting for a portion of the rise). Since both the official and the street exchange rates appeared to be functioning simultaneously in the economy, both values will be used. The disparities between the prices of controlled versus uncontrolled prices are important aspects of the determination of the need for and the value of the Food for Peace commodities.

As noted, the government had had considerable success in diminishing the cost of services through the controls on the minimum wage and by granting only small increases in government salaries. Table 2 lists those occupations/professions most related to the

areas being studied and their monthly salaries in cedis, the controlled exchange, and the larger street exchange. Although higher than in some African countries, the salaries and wages would still have to be termed as relatively low. Perusal of that table in comparison to a later one on food prices (Table 3), highlights the low purchasing power of those wages and salaries, a more meaningful measure. It must be noted, however, that some goods were available, at least at times, at controlled prices. Persons able to obtain those would substantially increase their purchasing power.

Table 2: Reported Monthly Salary/Wage* Range, Median, \$US Equivalent (Official and Unofficial Exchanges) after Tax and Social Security Deductions

| Position/Work | Cedis | | \$US Equivalent | |
|-----------------------------|---------|--------|--------------------|--------------------|
| | Range | Median | Official 2.75:1 | Unofficial 30:1 |
| State Registered Nurse | 400-500 | 450 | 164 | 15 |
| Qualified R.N. | 400 | 400 | 146 | 13 |
| Enrolled Nurse | 300-400 | 350 | 127 | 12 |
| Community Health Nurse | 350-500 | 425 | 154 | 14 |
| Nutrition Technical Officer | 400-500 | 450 | 164 | 15 |
| Teacher | 400-500 | 425 | 154 | 14 |
| Civil Servant, Mid Level | 560-580 | 570 | 207 | 19 |
| University Faculty | 800 | 800 | 291 | 27 |
| Guard/Gate Man** | 250-280 | 265 | 96 | 9 |
| Gardener** | 240 | 240 | 87 | 8 |
| Steward** | 270 | 270 | 98 | 9 |
| Cook** | 360 | 360 | 131 | 12 |
| General Laborer | 252 | 252 | 92 | 8 |
| Maid** | 252 | 252 | 92 | 8 |

*Assuming 21 work days per month.

**These often receive one or more meals, thus their real income is higher.

Many interviewed professionals said that they were growing gardens, farming small plots, taking on a part time job, and drastically reducing what they spend in order to feed their families. The flight of white and blue collar workers and professionals to other African countries was seen as a reflection of this inability to "live even moderately well" on their present income. The difference also caused increased value of the Food for Peace commodities, resulting in more mothers attending the clinics that had food distribution, even in relatively well supplied market areas.

Grocery stores comprise a low percentage of the food marketing system in Ghana. This has traditionally been the case but in times of inequity between controlled and uncontrolled prices, their influence has decreased. The local and district markets, usually conducted outdoors in designated areas, but also in stands scattered through the towns and cities, have a very large share of the food marketing in the nation. Hawkers added to that proportion. (See Graphic VII for a schematic of the system.)

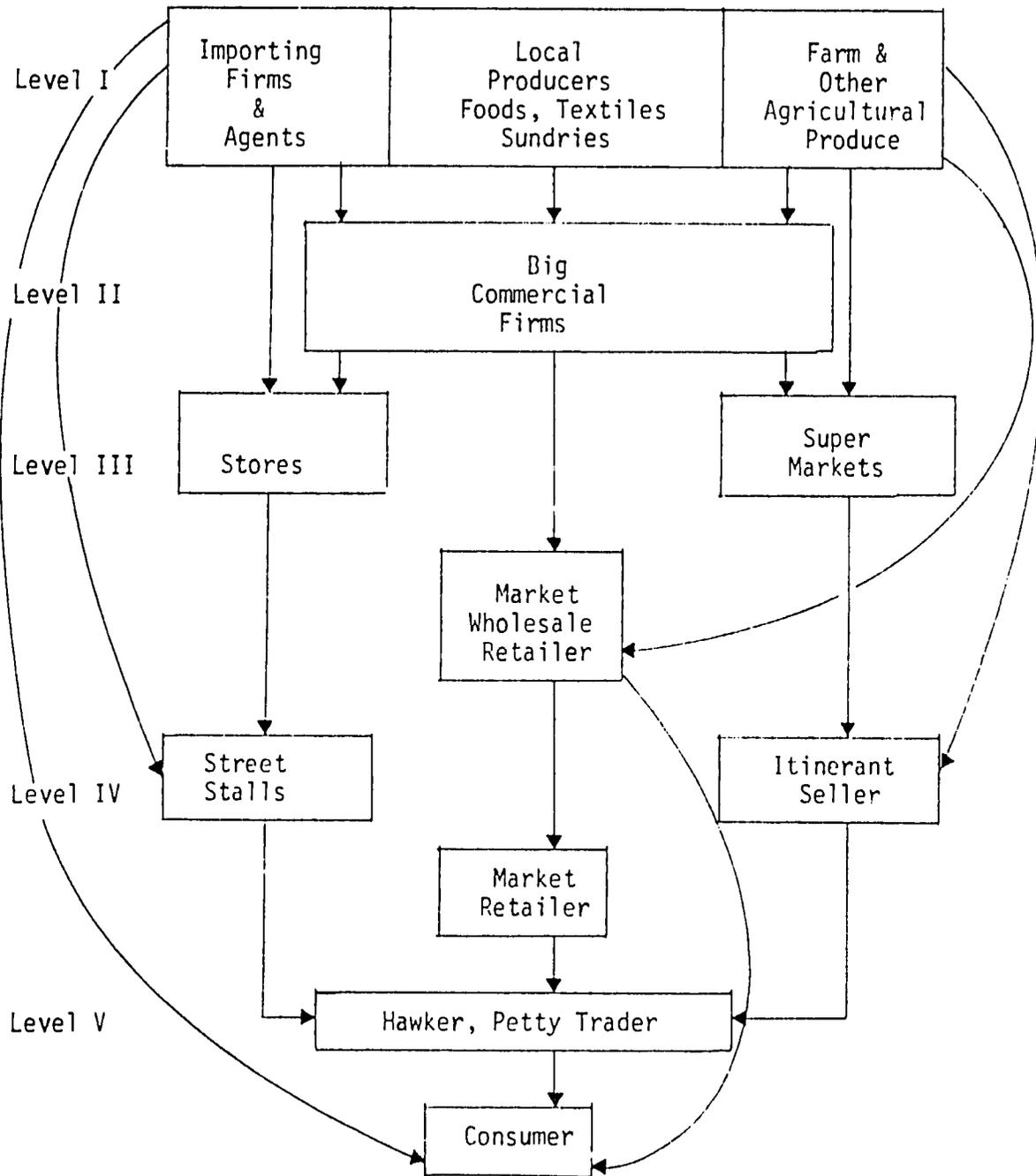
Much of the marketing of food is done by women. Operating with differing amounts of capital, they buy and sell fresh and processed produce and many other foodstuffs, both retail and in quantity amounts. Since they receive no wages, their own income is solely derived from any profit they can make on their sales. When they have to pay more for the goods, they charge more. Production of food has not kept pace with the growth of the population. Further, the relative ease with which foods can be transported to and sold in the nearby countries, which have quite stable currencies, causes the scarcity to be even worse.

The interaction of these two factors, the independence of the major part of the food marketing system from government control and the scarcity of food, has resulted in higher and higher prices. That also brings about greater pressures on the imported Food for Peace products. Their value increases the number of participants, makes it more worthwhile to risk stealing them, and subjects center managers to unusual temptations to use some themselves and/or share them with friends.

The evaluation team conducted a survey of the common food item prices in each of the areas included in the study. Those prices varied a great deal from one area to another, depending upon the local supply, difficulty and distance of transport, and demand for the product. Thus fifteen miles might see a 50% rise in the price of a much demanded product that was not easily available from the local supplies. Generally the prices in roadside stands and in the larger city markets were lower than in the other areas. Accra and almost all of the Upper Region were notably higher exceptions. Too, as would be expected, towns and villages off the main highways experienced higher prices. Populations at the end of long, dead end roads, suffered even higher costs for food.

Table 3 lists the most popular food items in Ghana and the median prices found in the survey. For each, the price is given in cedis, followed by its equivalent in US dollars at the official

Graphic VII: Schematic of the Food Distribution System in Ghana, including the Flows of Products among the Most Important Levels*



From: SAI, FLORENCE A. The market woman in the economy of Ghana. MS thesis. Ithaca, New York, Cornell University, 1971.

and unofficial exchange rates. Comparing the price in cedis to the wages in the previous table, a laborer on minimum wage of ₵12 per day could buy only one pound of white corn or ground sorghum with that day's wage. In volume, but not in nutritive content, he would fare somewhat better with cassava flour, two pounds. In any event, grain and root products make up a high portion of the diet of most poor Ghanaians; what he could buy with his day's wages would not adequately feed even a small family for a day. For those accustomed or forced to buy illegal Food for Peace commodities, both the wheat soy blend and the soy fortified sorghum grits would be economically and nutritionally preferable, a strong reason for the theft of these at the port and elsewhere. As more people become accustomed to these products, their prices will rise and the pressures to acquire them, through theft or other means, will increase commensurately.

Tomatoes, onions, and hot peppers (not shown in the table) are common ingredients in the sauces served with the foods made from grain and roots. Since they are used in relatively small amounts, their price was not considered prohibitive by many in the market place. Okra and eggplant, used with the fresh roots and plantain in soups and stews, were also not out of reach of professionals in the communities in Southern Ghana.

The higher protein containing crops (beans, peas, peanuts) are also costly for a laborer, although occupations with higher wages can make some use of them. High protein animal products (fish, meat, eggs) have risen so high, even for many professionals, that they are used in very small amounts and principally as flavoring. Oil, although relatively expensive, is used in small amounts in the soups, stews, and sauces, making its purchase still possible except for the lower paid occupations. Again, however, the relatively high cost of the oils bring enormous pressures on the port security when Food for Peace and World Food Programme soy oil is imported (witness the riot conditions described for one unloading in the management chapter).

Notice also in Table 3 that almost all the prices are higher in the Upper Region. Wages and salaries are the same as elsewhere and sometimes even lower since unemployment is so great. Thus in that region, suffering now and often with drought conditions, the populace is faced with nearly impossible prices in light of their purchasing power. The high incidence of malnutrition is understandable.

In the columns for both areas of Ghana, the equivalent prices in US dollars at the official rate are exorbitant for most items. Since many people are paid wages pegged at that official level, those prices are real for them. The plight of the low wage and low salary people is further emphasized.

Persons earning their living outside the controlled monetary system - business people, commercial farmers, and workers in highly sought non-government positions - pay for the foods in cedis

Table 3: Comparisons of Common Market Product Median Prices*
in Southern Ghana and Upper Region with \$US Conversion
(in Pounds unless otherwise noted)

| Product | Southern Ghana/lb. | | | Upper Region/lb. | | |
|--------------------------------------|--------------------|----------|--------|------------------|----------|--------|
| | Cedis | \$@ 2.75 | \$@ 30 | Cedis | \$@ 2.75 | \$@ 30 |
| Rice, Ghana brown | 8 | 2.91 | .27 | 11 | 4.00 | .37 |
| Rice, imported white | 11 | 4.00 | .37 | 18 | 6.55 | .60 |
| Corn, white | 12 | 4.36 | .40 | 14 | 5.09 | .47 |
| Sorghum, whole | 10 | 3.64 | .33 | 21 | 7.64 | .70 |
| Sorghum, ground | 12 | 4.36 | .40 | | | |
| Wheat soy blend (FFP) | 6 | 2.18 | .20 | | | |
| Soy-fortified sorghum grits (FFP) | 4 | 1.45 | .13 | | | |
| Wheat, bulgur (WFP) | 8 | 2.91 | .27 | | | |
| Beans (red, blackeye, white) | 8 | 2.91 | .27 | 14 | 5.09 | .47 |
| Peas (cowpeas, lentils) | 9 | 3.27 | .30 | 14 | 5.09 | .47 |
| Peanuts | 12 | 4.36 | .40 | 18 | 6.55 | .60 |
| Cassava, fresh root | 1 | .36 | .03 | | | |
| Cassava flour | 6 | 2.18 | .20 | | | |
| Yam (water and coco) | 2 | .73 | .07 | 5 | 1.82 | .17 |
| Plantain | 1 | .36 | .03 | | | |
| Okra | 3 | 1.09 | .10 | 5 | 1.82 | .17 |
| Tomato | 3 | 1.09 | .10 | 6 | 2.18 | .20 |
| Onion | 4 | 1.45 | .13 | 4 | 1.45 | .13 |
| Eggplant | 3 | 1.09 | .10 | 4 | 1.45 | .13 |
| Fish, fresh | 20 | 7.27 | .67 | | | |
| Fish, smoked | 30 | 10.91 | 1.00 | | | |
| Fish, dried | 20 | 7.27 | .67 | | | |
| Beef | 30 | 10.91 | 1.00 | | | |
| Goat | 30 | 10.91 | 1.00 | | | |
| Chicken | 20 | 7.27 | .67 | 20 | 7.27 | .67 |
| Eggs, each | 2 | .73 | .07 | | | |
| Dried milk | 14 | 5.09 | .47 | | | |
| Lactogen | 16 | 5.82 | .53 | | | |
| Sugar | 24 | 8.73 | .80 | | | |
| Oil, peanut and coconut /liter | 30 | 10.91 | 1.00 | | | |
| Oil, corn/liter | 32 | 11.64 | 1.07 | | | |
| Oil, soy (WFP and FFP)/liter | 28 | 10.18 | .93 | | | |
| Oil, palm/liter | 17 | 6.18 | .57 | | | |

*Generally, prices were about 25% higher in Accra and 25% lower in Takoradi than those for the rest of Southern Ghana.

gained at approximately street exchange rates. That group is large enough to keep the prices at such high levels.

This dual economic system operates against certain segments of the population, primarily those in minimum wage and controlled salary positions. The increasing rates of malnutrition, greater incidence of disease, and thefts of the Food for Peace commodities are all related to this problem. There were strong national and international pressures on the government to devalue the cedi. Many government officials and private individuals doubted that such a measure would have more than a short term effect. Increased agricultural production, improved food processing, and renovation of the transportation system were seen by the government as the only long term solutions to the problem.

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CHAPTER III: FOOD AID TO GHANA

A multitude of documents chronicled the decline of agricultural production in Ghana and the rapid rise of the population. The movement of the rural population to the urban centers, chronic drought conditions in parts of the country, and decreased capacity of the farm sector to invest in seed, fertilizer, machinery, and other inputs are blamed for the decline in production. Despite government efforts to introduce family planning, the exodus of non-nationals some years back, and a lessened immigration in recent years, the population has continued its rapid upward trend. Improved health care has helped reduce the mortality of children, mothers, and the elderly, substantially contributing to the greater population pressures.

Several national and international organizations have provided food assistance to the people of Ghana. The three major sources have been the United States through Food for Peace, the United Nations with its World Food Programme, and the European Economic Community in its contributions to the World Food Programme, to the Catholic Relief Services for distribution, and directly to certain projects and localities. Many other nations have helped with food; in 1981, those encountered included The Netherlands, Canada, France, Switzerland, Germany, the People's Republic of China, and Italy. Projects for the improvement of agriculture, and additional help toward the increase of food production and therefore contributions to the total food supplies, were sponsored by the United States, the United Nations Development Programme and the Food and Agriculture Organisation, East Germany, and the European Economic Community.

STATUS OF THE FOOD PROBLEM

The chapter on Ghana described the problems of the infrastructure, the economy, and the health. While few statistics were available on recent total agricultural production, those of the near past are illustrative of the degree of the deficits faced by the nation. A large portion of the population consumes meals based on grains. The Government of Ghana and cooperating programs from other nations and agencies have provided technical assistance toward the increase and improvement of that commodity. Table 4 indicates that at least up to 1979, the efforts had not been sufficient to overcome the shortages, even though they may have kept them from becoming greater than they were. Nevertheless, a downward trend continued across the seven years, 1973 through 1979.

The 1972 population estimate of 9.5 million, when compared to the 1980 estimate, 11.5 million, makes these declining grain production figures of even greater significance; in grain, at least, the nation faced a reduced capacity to feed itself.

Table 4: Grain Production in Ghana from 1973 through 1979, by Type, in Thousands of Metric Tons*(112)

| Type of Grain | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979** |
|---------------|------|------|------|------|------|------|--------|
| Corn | 427 | 486 | 343 | 346 | 300 | 364 | 270 |
| Rice | 62 | 73 | 71 | 50 | 50 | 31 | 21 |
| Small sorghum | 109 | 154 | 122 | 70 | 70 | 93 | 100 |
| Large sorghum | 167 | 177 | 135 | 80 | 80 | 80 | 120 |
| TOTAL | 765 | 890 | 671 | 546 | 500 | 558 | 511 |

**A metric ton = 1000 kilograms or 2200 pounds.*

***Officially listed as an estimate although the "round" numbers for some of the other years would suggest that they, too, were estimates.*

Ghana, of course, exported some of its natural and agricultural production, chief among these being bauxite, cocoa beans, lumber, and gold. Some of the money from those exports could be and was used to import foodstuffs. Table 5 incorporates the totals from Table 4 and adds the imports of grains for those same years. The nation is shown to have become increasingly dependent upon those imports to provide the grain necessary. Even with the imports, however, the totals did not increase commensurately with the rises in the population; a deficit feeding capability, in terms of grains, resulted.

Table 5: Comparison of Grain Production and Importation from 1973 through 1979 in Thousands of Metric Tons (112)

| Supply Source | 1973 | 1974 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---------------|------|------|------|------|------|------|------|
| Production | 765 | 890 | 671 | 546 | 500 | 558 | 511 |
| Imported | 157 | 177 | 84 | 162 | 370 | 330 | 330 |
| TOTAL | 822 | 1067 | 755 | 708 | 870 | 888 | 841 |

**Production appeared to be primarily based on estimates; import figures were from the customs officials.*

The types of grains brought into the country differed somewhat from those being grown. Rice, corn (in so far as yellow corn can be compared to white corn), and some sorghum products were alike in both sources. The largest proportion of the grain imports was wheat, not grown in the country. However, there is a substantial market for wheat flour for the baking industry and some of the

rest was bulgur, a partially cooked product substituted readily into the meal preparation customs.

Estimates on other farm production appear about like those for grain: a declining trend. Cocoa bean exports fell sharply, said to be due in part to inclement weather and in part due to transporting the product into Togo and Ivory Coast, neighboring countries, to be sold for "hard currencies." While many root crops are grown commercially, their principal production is as a subsistence and small plot commodity. Because of this, estimates are difficult to obtain; their shortage in many market places, however, makes it appear that they, too, were in decline. Banana and plantain production was thought to have remained about the same but they are of minor importance in the consumption pattern except in a few locales.

UNITED STATES FOOD AID

The availability of food per capita from domestic sources has been decreasing over the past years due to rapid population growth and decreased agricultural output. Malnutrition and widespread dietary deficiency diseases make Food for Peace Title II food an important part of the USAID/Ghana development strategy. During FY 81, Ghana will receive Title II foods valued at over US \$6.2 million. These are being used in the Maternal Child Health program (176,000 recipients), School Feeding (68,000), Other Child Feeding (11,000), and Food for Work activities (5,000). USAID/Ghana's continued priority is the Maternal Child Health program, which complements the activities being planned under the Mission's primary health care project, scheduled to begin in FY 82.

The provision of foodstuffs under Title I, a concessional sales program, and under Title II, a humanitarian donation, looms large in the total food picture of Ghana. These two accounted for about 4% of the 1979 consumption and were estimated to rise to more than double that for the next fiscal year, 1982. Table 6 lists the PL 480 importations for 1980, those scheduled for 1981, and the expected quantities for 1982.

Table 6: Estimates of US Assistance for Ghana in 1980
1981, and 1982 (113)

| Type of Import | 1980 | | 1981 | | 1982 | |
|----------------|--------------|----------|-------------|----------|-------------|----------|
| | PL480 MT* | Non-Food | PL480 MT | Non-Food | PL480 MT | Non-Food |
| Grants | 5300 | 3095 | 5800 | 8560 | 6800 | 10000 |
| Loans | 12700 | 7000 | 30000 | 10000 | 45000 | 10000 |
| TOTAL | 18000 | 10095 | 35800 | 18560 | 51800 | 20000 |
| COMBINED | 28095 | | 54360 | | 71800 | |

*MT=metric ton

USAID/Ghana and the Government of Ghana plan to ask for greater increases in the Title I sales program during the rest of fiscal year 1981 and in 1982; these account for a substantial part of the estimated rise.

PRIOR SERVICES

The initial Food for Peace Title II aid to Ghana was approved in 1958 and the first commodities arrived in 1959. Except for one brief suspension, then, that assistance had been provided for 22 years at the time of the evaluation in 1981.* Emergency drought relief food was a part of the aid at times. Title I sales had varied over the years; most of the help had come through the Title II provisions of PL 480. The imported commodities have varied across the years and have included rice, wheat, sorghum, corn, and milk products. Most recently, however, the Title II commodities have consisted of soy oil plus Wheat Soy Blend (WSB) and Soy Fortified Sorghum Grits (SFSG). Small quantities of bulgur wheat, some fortified with soy and some not, have also been brought in. All four of these commodities were available in 1981 but the latter was a minor component of the total shipments.

During the early years, several volunteer agencies were utilized for the distribution of the commodities. Later, these were reduced to two: the Christian Service Committee (an organization of Church World Services, a Protestant affiliation group) and Catholic Relief Services (an entity of the US Catholic Conference), although the foods were to be provided on a non-sectarian basis. Some costs of managing the commodities are borne by the volunteer agency. Necessarily, then, the administration costs for two agencies operating in Ghana were high. Too, controlling the distribution so that no family received more than its due was more difficult when both were operating in near vicinity to each other. In 1972, the two organizations discussed a single, coordinated effort, and in 1973, the program was turned over to Catholic Relief Services. (25)

*Food help had been given under some other provisions beginning in 1953. (45)

A brief evaluation was conducted in 1972 and the report (25) described services to mothers and pre-school children under the Maternal Child Health (MCH) provision, Day Care Centers, School Feeding, Food for Work, and Institutional and Health Cases. The latter program was chiefly for hospital patients and institutions for handicapped and orphaned children, and have since been subsumed under either the School Feeding or the Other Child Feeding programs. The 1972 evaluation document stressed the need to increase the communications among the Government of Ghana agencies, USAID, and the volunteer agencies. It also suggested that the government should provide greater help to the programs but the Ministry of Health later pointed out that both it and the Ministry of Education were already carrying out much of the distribution through their own facilities and personnel. (54)

FOOD FOR PEACE OPERATIONS

The Food for Peace office of USAID/Ghana serves as the local monitoring agency and in coordination with the USAID/Ghana, the USAID director, and the US Embassy, as the liaison between local operations and the Food for Peace office of AID/Washington. The Food for Peace officer and USAID/Ghana staff also monitor the Title I operations in the country in direct association with the Government of Ghana.

Catholic Relief Services/Ghana receives the commodities from the ships, stores them as needed, and distributes them to the centers. It also monitors those centers in their operations through agreements predicated on the center reported needs of the populations they serve. Additionally, Catholic Relief Services conducts seminars on the work, oversees the collection of information for the several reports the centers submit, and using them, prepares the necessary information for the Food for Peace, Government of Ghana, and its New York offices.

Food for Peace/Ghana

Several USAID/Ghana offices and programs provide information or are otherwise contributory to the Food for Peace efforts. Crop production forecasting, improvement of agricultural production and marketing, primary health care programs, and the general country development strategy are contributors. The mission director is the overall supervisor of the Food for Peace program. Documents on the CRS program are subject to review by the mission director, by the ambassador's staff, and by the ambassador himself.

Many Government of Ghana offices also provide information and help in the coordination of the Food for Peace program. USAID and the government also work in direct linkage on the Food for Peace Title I program. In the case of Title II, the Ghana ministries work both with USAID in producing the statistics and other information necessary for the basic documents, and with CRS in the

design, finance, and implementation of the program. (Further details on those functions are outlined in the management chapter of this report.) In both the Title I and II operations, coincidence with the goals and implementation of the Government of Ghana's national plans is an important aspect of the coordination efforts with USAID and Catholic Relief Services.

The Food for Peace office of USAID/Ghana is staffed by a project officer, an assistant, and a part time secretary. Sufficient office space and other logistical support services are provided. The office had no vehicle of its own but the mission assisted with transportation as best it could under the severe constraints it suffered due to vehicles being out of service and because of needed repairs, tires, and other parts. The lack of a vehicle, however, was reported as a considerable limitation to the functioning of the office.

Food for Peace staff members are expected to receive and maintain records from the volunteer agencies, monitor the receipt and distribution of the commodities, prepare pertinent documents on the operation, and review the requests for commodities through the Annual Estimated Requirements and the quarterly calls forward and reports to the USAID/Ghana director. The office also reviews special requests such as increases in the rations for certain areas and for studies needed to improve the services or their delivery for the director. General cooperation and coordination are expected between the Food for Peace and the Catholic Relief Services offices in order to maximize the potential results of the program.

Catholic Relief Services

The headquarters of Catholic Relief Services of the US Catholic Conference are located in New York City. That office serves as the administrative center for all the assistance given by that organization throughout the world, which includes many services other than the distribution of the Food for Peace Title II program. One of the headquarters officers is specifically responsible for Africa; he also receives help from others within the system. An area office in Nairobi, Kenya, also provides assistance and support for the CRS/Ghana program. The Nairobi office has been particularly active in the development and dissemination of the Growth Surveillance System, in conducting regional studies, and in training medical officers, and other help to the several country offices.

The CRS/Ghana headquarters is located in Accra, the capital. The chief administrator for the in-country program is the director, who is responsible for the entire operations as well as coordination with USAID and the Government of Ghana. The director has two assistant directors, one for food and nutrition, and the other for program operations. The assistant director for food and nutrition was an experienced Ghanaian nutritionist who supplied the technical direction for that part of the program. The

assistant director for program operations spent much of his time arranging for and supervising the unloading of the commodities from the ships, warehousing them, and overseeing the loading of trucks destined for the distribution centers. He is assisted by a dispatcher located at one of the ports. Two program assistants provided general backup to the director and to those in charge of the other facets of the program operation.

Eight field supervisor positions are included, one for each of the regions of the nation. Six were on staff at the time of the evaluation and CRS was in the process of filling the other two. The field supervisors help conduct regional seminars, perform the monitoring functions in the centers under their purvue, and give general assistance and orientation to the center managers and other center staff involved in the distribution and growth monitoring systems. Each of the field supervisors is located strategically within the area to be served.

Catholic Relief Services in Ghana does not distribute the commodities directly. Instead, through written agreements, much of the distribution is carried out by local Government of Ghana offices (70% of the centers), including those of the Ministry of Health, Ghana Education Service, and the Ministry of Social Welfare. Most of the other centers (25%) are operated by religious organizations (Catholic, Protestant, and Moslem). The remaining centers (5%) are operated by companies and organizations such as a development council and the Red Cross. Some centers are combinations of government/other organization operations, especially many of the hospitals, schools, and day care centers. The distribution centers, then, are independent in the operations of their general health and educational care, or are subject to their governing bodies. For instance, immunizations, nutrition education, and general health care practices are in the hands of the clinic, hospital, school, and day care center personnel. CRS/Ghana has limited monitoring functions over the centers and those described in the agreement with each center. (See the agreement form in Appendix E.) CRS can monitor the receipt, storage, and distribution of the commodities to ensure that they meet the specifications in the regulations governing the Food for Peace program and the CRS policies for implementation. A growth monitoring system is mandated for all MCH-Child operations and a monthly GSS master chart, together with summary information, is required. Similarly, CRS receives executed copies of the trucking waybills, monthly reconciliations of the commodities, and loss reports from the managers of the centers. All other intervention by CRS is carried out through help to the centers and in cooperation with them. Withholding the commodities or suspending the service entirely is the only final recourse action open to CRS when some aspect of the management is unsatisfactory. That action has been taken in a few cases.

CRS/Ghana provides information sheets and application forms for sites that want to be included in the distribution of the commodities, whether they are hospitals, clinics, schools, day care

centers, or food for work projects. (See sample forms in Appendix E.) Inspections of the potential sites are made to determine the adequacy of locale for the service and especially to ensure that the storage area will protect the foods. Interviews with the personnel determine their capabilities to perform the other services specified in the agreement. CRS also helps, when it can, with scales for weighing the commodities and the children. In a few limited cases, it has been able to provide some transportation, either through a vehicle, some money for gasoline, or help the center arrange for these. Seldom is CRS able to furnish a vehicle directly; usually it uses its "good offices" with other agencies so that one can be secured.

An important CRS service is the provision of commodities other than those supplied by the Food for Peace Title II program. The European Economic Community and some individual governments send some food to the centers through Catholic Relief Services, notably dried milk preparations, baby formulas, and multi-vitamins. Used clothing, chiefly from America and Europe, is also distributed. Some vaccines, medicines, drugs, and other health care products and equipment are also often channeled through Catholic Relief Services. Within limits, CRS can also arrange for, or facilitate, the transportation of many items to the centers from various donor sources. These additional services of CRS are not minor; they often spell the difference between adequate and inadequate functioning of a center.

There are some charges connected with the CRS delivered commodities that must be borne locally. Generally, the recipients are expected to pay them. With a few special exceptions, a service charge of $\text{C}\text{1.00}$ is paid by each mother each time her child or children receive rations. That charge may be excused in cases of extreme hardship. (One sample site had permission to charge $\text{C}\text{2.00}$, with the extra to improve the clinic.) If a mother cannot bring a container in which to receive the commodities, one can be furnished and generally a 50 pesawa (the cedi is divided into 100 pesawas) charge is made. Some of the grain bags and the oil tins are often reusable and the center can sell these for a pre-determined price. All of these monies are sent to CRS/Ghana unless a direct agreement concerning the use of the funds is made. The same procedure is used when commodities are unfit for human consumption but can be sold for livestock or poultry feed. The kinds of arrangements CRS makes with centers for the use of some of the monies included help in transporting the commodities to distant clinics and out stations, improvements in certain specified health delivery supplies or equipment, or special dietary or medical additions needed by the clients.

A charge of $\text{C}\text{1.00}$ is also made for the individual child Growth Surveillance System chart and for the master charts. Those funds are to defray the cost of printing them. Some centers used the Road to Health child charts furnished free by the Ministry of Health. The charges were considered reasonable and not beyond the capability of most recipients to pay, according to the

opinions of both the interviewed center staff members and participants. Destitute families can be exempted from the payment. Several center managers, especially those associated with a religious organization, noted that when cases appeared that did not have prior approval, a staff member would make the contribution for the recipient. That, too, was laudatory, considering the low salaries or stipends the personnel received and the high cost of living.

WORLD FOOD PROGRAMME IN GHANA

Two World Food Programme (WFP) projects were operational in Ghana at the time of the evaluation (103):

- o Project 2075 "Assistance to Forest Plantation"
- o Project 2258 "Plantation of Oil Palms"

Both of these projects involved "Food for Work" and were different from CRS activities in Ghana. The first project's objective was to help the Government of Ghana in implementing part of its long term reforestation plan which aimed at the establishment of 272,500 acres of forest plantations. WFP commodities were given as part payment of wages to the worker.

During the first phase of the project, 1975-1979, the Ghana Forest Department, responsible for the implementation of the project, had exceeded the planned target of 40,000 acres of forest plantations. The second phase of the project was therefore approved (1980-1985). The total expenditure over the 5 year period will be US \$31,350,000 of which WFP participation will be the supply of bulgur wheat, dried skim milk, edible oil, and canned fish, for an amount of \$12,380,000. The savings that the Forestry Department will make by incorporating WFP food as part salary, will be used to improve social amenities in laborers' permanent settlements and other items such as transport, primary schools, inservice training, potable drinking water, and health services.

A forestry project requires a long time before it can produce suitable size and quality of wood, but it is expected that eventually the reforestation increase will provide more self sufficient jobs. The timber industry in Ghana ranks second only to cocoa and the forest resource can boast of providing 70,000 associated jobs. The British and Dutch governments, made aware of bottlenecks created by lack of foreign currencies, have already agreed to provide seven-ton lorries and pickups.

The second WFP project, plantation of oil palms, contributes to a large scale program started in 1972, and aims at developing new plantations of oil palm and rehabilitating existing ones. With partial financing from the World Bank and WFP, commodities are given as part salaries. The objectives of the project are

as follows:

1. To plant 16,000 acres in a nucleus plantation and an additional 3,000 acres in surrounding shareholders' farms.
2. To expand existing acreage of 13,000 acres.
3. To replant or plant, with improved varieties, 87,000 acres in private small holdings (about 1,400 acres per year).

Again, the achievements for the first phase of the project, 1978-1980, were superior to the goals that had been set and the project entered its second phase, 1981-1984.

In some geographic areas, both those projects can result in food distribution from both CRS and WFP. The purposes of those distributions are different but it would be of interest to both CRS and WFP to know that their food distribution was not given to the same participants. There was no evidence that duplication was occurring. The WFP senior advisors, however, wanted to have more communications with CRS to reduce the possibilities of double provisions. Any large food distribution program, especially Food for Work programs in which food is given as part salary, is bound to have some part of its food sold or bartered for other goods when food is as scarce as it is in Ghana.

That aspect, together with the common feeling among the workers that they worked for the food, and therefore, it is individual property, did result in some of the commodities being offered for sale in local markets surveyed by the evaluation team. Since, except for oil and one very small shipment of bulgur wheat to CRS, the commodities were different, their sources could be traced. That portion attributed to the World Food Programme was regretted by that organization's officers but they considered it not unusually large nor totally undesirable under the circumstances.

A third WFP project had been approved, but it was not yet operational. It is project 8570/Q, Construction of Small Earth Dams and Small Scale Irrigation, to assist agricultural development.

WFP aid was requested in 1980 as an incentive to carry out several labor intensive projects within the framework of agricultural development launched by the government in the Upper Region of Ghana with the help of a World Bank loan. Final clearance for that project was to be given after an inspection visit by a World Bank mission in 1981. In all these projects, WFP had required the government to pay at least half the workers' salary in cash, in order to avoid too much sale or bartering of food on the market. WFP, like CRS, had some problems with pilferage at the port, and had decided to bring the food in containers. The first shipments

appeared to show an improvement over the previous arrangements in which individual bags and cartons were unloaded. The loss of soy oil was reported to have been substantially reduced.

AGGREGATE FOOD AID

The emphasis on food aid from the United States, only a part of which was the subject of this evaluation, is not intended to imply that that country is the only one assisting Ghana. The contributions of the European Economic Community (EEC) and its member nations, have already been noted and will be discussed in greater detail in other sections since they are often combined with Food for Peace commodities for some recipients. When the value of the food aid from the European Economic Community, The Netherlands, and Switzerland in Table 7 are combined, they are only about 20% less than the US Title II donation. Other donations from these two countries and from Germany, specifically granted to certain centers, further raise the European total. Special help from parishes and organizations in those countries and from France, Italy, and Spain (not listed in the table) are not considered as government assistance but are of importance to the populations receiving them. Parishes, congregations, and organizations in the US also furnish direct assistance, and that, too, is considerable.

Australia, with two projects listed in Table 7, also gave a great deal of assistance to the food program. With more than a million dollars of value, the Australian contribution summed to one of the large efforts. Japan is expected to help in the near future. Not included in the table, but discovered during the study, was a donation of 60,000 bags of rice from the People's Republic of China. Some Canadian flour was reported to have been donated in some areas. East Germany supplied some tractors for the improvement of agriculture and that, too, could be said to aid the food supply. Reports of help from the USSR, North Korea, and Yugoslavia were circulating but they could not be confirmed in the limited time available for the research. The US assistance to agriculture, mentioned in an earlier context, should also be included in the aggregate. Indeed, that contribution, as a long term program to help Ghana feed itself, when combined with the efforts of other governments and the Government of Ghana to permanently improve agricultural production, are probably the most important to the future of the country.

In summary, then, many nations and international organizations are cooperating with the Government of Ghana to:

1. Alleviate the present shortages of food, and
2. Improve the nation's capacity to feed its population.

All of the contributions are significant to the total food aid program. The US Food for Peace, and the other USAID projects, loom large in the combined efforts.

Table 7: Externally Financed Technical Cooperation Projects and Activities: 1980
Country Receiving Assistance: Ghana Sector: Humanitarian and Relief (104)

| Project/Activity | Source of Assistance | Assistance Committed (\$ US Equiv.) | | Duration of Total Project Begin/End Dates | Nature of Assistance and Location |
|--|----------------------|-------------------------------------|------------------|---|--|
| | | 1980 | Project Duration | | |
| Food Aid | Australia | 1,000,000 | 1,000,000 | 1980 | The provision of grain to make up short falls in Ghanaian production. |
| Head of Mission Discretionary Aid Fund | Australia | 40,000 | n/a | Ongoing | Miscellaneous small projects, such as provision of pumps, generators, and books. |
| Commodity Aid | Japan | n/a | n/a | 1980 | Supply of Japanese wheat. |
| Food Aid | Netherlands | 60,000 | n/a | Ad hoc/open | Baby food and milk powder. |
| Food Aid | Switzerland | 100,000 | 100,000 | 1980 | Supply of milk products to hospitals, churches, and welfare organizations. |
| Emergency Aid | Switzerland | 60,000 | 60,000 | 1980 | Electrical equipment and spare parts for Tamale. |
| PL 480 Title I | USA (US Food Aid) | 12,700,000 | 12,700,000 | 1980 | 40 years credit for wheat, corn, and rice. |
| PL 480 Title II | USA (US Food Aid) | 4,900,000 | 4,900,000 | 1980 | Donation program managed by Catholic Relief Services, helps meet nutritional requirements of 260,000 Ghanaians in maternal-child health and school feeding programs. |
| Normal Food Aid | EEC | 3,800,000 | 3,800,000 | 1980 | Supply 1,725 tons cereal, 2,500 tons skimmed milk powder, 200 tons butter oil. Proceeds to be used for development in Ghana. |

IMPLICATIONS OF THE FOOD AID

The study of the conditions in Ghana, presented in Chapter II, resulted in the following conclusions:

1. Although the population growth in Ghana has been somewhat less than that projected, the increase is still very high, one of the highest in Africa.
2. Agricultural production has not kept pace with the population increase, resulting in a deficit food supply.
3. Economic conditions in the country are such that some segments of the population could not pay for sufficient food even if it were available.
4. As a consequence, malnutrition has increased in most sections of the nation, and especially in the Upper Region and portions of the Brong Ahafo, Northern, Western, and Ashanti Regions.

A review of the production of grains, a major food item for most Ghanaians, in conjunction with the imports, whether for purchase or as assistance, reveal that:

1. The imports, when added to the national production, have not been commensurate with the population growth.
2. The food assistance part of the imports, although large in proportion, do not meet the need when the supply, health, and economic pressures are taken into account.

Food aid from the several nations and organizations, especially that from the United States, the World Food Programme, and the European Economic Community, is of considerable assistance to the people of Ghana. The conditions the nation faces with its food supplies, however, are so severe, that the evaluation team agreed that:

Recommendations:

Food aid to Ghana should be maintained at a level to ensure at least the minimum requirements for the severely malnourished and those whose health is at a high risk because of insufficient food.

Food aid should also be increased to help with those development tasks that if successful, could increase Ghana's capacity to feed itself.

It is unlikely that the total food supplies could be increased to such a point that everyone in the nation could receive supplementary commodities. It follows, then, that these recommendations are made conditional to adequate targeting of the food aid to the malnourished and to the most relevant developmental projects.

CHAPTER IV: CENTRAL MANAGEMENT OF THE COMMODITIES

The management of the commodities in Ghana was divided into two separate operations. The central management consisted of the arrival and unloading of the ships, the warehousing of the commodities, the transportation of them to the distribution centers, and the attendant recording procedures required. While Catholic Relief Services/Ghana was chiefly responsible for the coordination and the operations, those tasks were also shared to some degree by the several entities of the Government of Ghana, a contracted surveyor at the port, the shipping line, and USAID/Ghana. The separate roles of each and the interactions among them were studied in detail by the evaluation team.

Catholic Relief Services also worked in cooperation with the distribution centers throughout the country. Those tasks that applied to the central management of the commodities are described within the present chapter. The management of the commodities by the center themselves are detailed in the following chapter to provide a clearer delineation of the separate responsibilities between the operations related to central management from those of the distribution.

PORT, WAREHOUSE, AND TRANSPORTATION OPERATIONS

Due to unusually large losses in the Ghana ports, warehousing, and transportation of the Food for Peace commodities, an extensive investigation into them was carried out in 1977 and 1978 by the Auditor General's office and the Food for Peace office in Washington, DC; by the US Embassy and USAID offices in Ghana; with the cooperation of Catholic Relief Services offices in New York and Accra, Ghana; and with the assistance of the several Government of Ghana authorities involved in the operations. A great deal of effort was expended in assessing the responsibilities and the fiscal liabilities of the several parties, including the shipping companies, for the losses. Considerable difficulty was experienced in determining the extent of the losses and affixing the responsibilities for them. Overlapping roles and gaps in the management system complicated the investigation. For a period of time, the Food for Peace program to Ghana was suspended. After lengthy negotiation, an arrangement was made whereby the program was reinstated. (117)

Approximately a year prior to the present evaluation, a new director assumed responsibility for the Catholic Relief Services programs in Ghana. A high priority task assigned to the director was the reduction of the losses. Consequently, the evaluation team dedicated considerable effort in the study of the early 1980 system, modified arrangements inaugurated in mid-1980, and the results of the two management systems. The investigation included an intensive review of the available documents, interviews with a wide variety of officials, and monitoring the unloading of a

shipment, trucking to the warehouse, and the warehouse itself. Trucking from the warehouse to the distribution centers was studied via the documents and interview responses of the managers of the centers.

The second phase of the study, that of the CRS supervision, was conducted through an examination of the records in the CRS/Accra office and interviews with the center managers in the field. The third phase, USAID Food for Peace office monitoring, was investigated via an examination of the documents in that office and interviews with the employees.

During the study of the port of Takoradi on June 2 and 3, a meeting was held with the acting director of UMARCO, the shipping agent for the Delta Line. The agent advised that the Del Monte arrived on May 28 and started to unload on May 30 - and that the unloading was expected to be completed on June 4. He indicated that the security at the port was not good and showed a letter addressed to the port manager by the captain of the ship, in which the latter complained "that the stevedores openly pilfered sacks of cargo and even the police and customs at the docks were not able to stop this mass thievery."

Subsequently, the agent arranged for a visit to the port facilities and a meeting with the captain of the ship. The captain was quite cooperative and showed some of the tricks used by the stevedores to hide half-bags of commodities so that they could pass them as sweepings unfit for human consumption when they left at night. The captain also showed pictures he had taken after the stevedores started working in the holds. Many bags that had originally been intact had been ripped open by the stevedores in the hold of the ship. (Copies of the pictures taken by the captain were to be forwarded to AID/Washington.)

During later meetings with the captain, the shipping line representative, the director of CRS, the "Caleb Brett" Surveyor representative, and an official of Ghana Supply Commission, the following information was received:

1. Ghana Supply Commission acts as agent for CRS concerning all clearances with Port Authority and Customs;
2. The shipping line hires the stevedores from the Ghana Cargo Handling Corporation and consequently is responsible for the losses incurred within the holds of the ship and until the bags are unloaded into trucks;
3. The arrangements for unloading PL 480 were changed in 1980. The cargo is now unloaded directly into trucks standing under ship tackles;
4. CRS has obtained authorization from the government to hire its own trucks and is able to transport the food into its own controlled warehouse.

This new procedure of unloading directly into private trucks and storing in a CRS warehouse reduced the losses that occurred during the unloading on the quays and the storage in Port Authority sheds that existed in the past. The responsibility for these incurred during the period when the commodities were in the port was not recognized by the Port Authority nor by Ghana Cargo Handling. (The commodities were then transported by the State Transport Authority who accepted responsibility only for the commodities loaded on their trucks.)

To clearly define the responsibilities of each party, the present system now in use is:

1. There is a daily tally that is signed by the:
 - a. representatives of the ship, the chief mate;
 - b. representative of the Cargo Handling Corporation;
 - c. representative of the Surveyor.
2. There is a delivery tally sheet prepared by Ghana Cargo Handling Corporation and signed after each truck is loaded by representatives of Cargo Handling, the ship representative, and the truck driver.
3. Ghana Supply Commission issues a waybill for the truck based on the delivery tally.

Three copies of the bill of lading from Ghana Supply Commission are signed by the Ghana Supply representative and the truck driver: one for the Ghana Supply Commission, one for CRS, and one for the truck driver (to be signed by CRS as a receipt when the bags are delivered, and on which CRS will note the missing or damaged commodities, if any). Under this system, the shipping line is responsible for all shortfalls until the trucks are loaded and the truckers are responsible for goods until delivery at the CRS warehouse.

Claims can be made against the shipping line based on the surveyor's report. Claims against the truckers are settled unilaterally by CRS when payment for the transport is made to the truckers by simply deducting the value of the lost commodities from the payment.

The reconditioning of bags of cereals declared by surveyors as partially empty cannot be done on the quay because of security reasons but is done in the CRS warehouse situated near the port. This system reduced considerably the losses at the port but those losses are still too high to be acceptable, either by the shipping lines or by the truckers.

During the second day of the unloading of the Del Monte, police in uniform and in plain clothes, and navy and army units were

assigned to control the stevedores. (See local press article, Appendix B.) Their efforts were not totally successful. The overall problem of security at the ports is still pending. The following information was gathered on that subject:

Takoradi: The perimeter of this port was quite easy to penetrate; therefore, the police had to cope with pilferers "en masse" once they gained access to the piers. While the Del Sol was off-loading, the number of unauthorized visitors in the vicinity varied from 75 early in the morning, to 300 by 3 pm. Several policemen, despite their best efforts, were unable to control the crowd. Loose security at the gangplank also accounted for the breakdown of the security network. In the case of the Del Sol, personnel employed by UMARCO failed to screen and control the entry of unauthorized individuals onto the ship itself.

The local police were ill-equipped and some were reported to be corrupt. By their own admission, they were afraid of the crowds.

Poor equipment and general worker dissatisfaction also accounted for many delays in off-loading and damage to cargo, which in the case of the Del Sol, was extensive.

Road blocks were set up and pilferage then tended to be confined to the ship's hatches and the pier itself. The pilferers transferred the contents of the bags into their own containers so that they could claim the food to be "sweepings." Thereafter, they could cross barriers with impunity. Their techniques caused major losses of commodities and increased the number of half empty bags delivered to CRS. Obviously, as with those bags damaged within the ship, they will eventually be counted as shortlandings, and they then become the shipping line's liability. In the case of the Del Sol, the shortlanding losses were approximately 7% of the entire consignment. On the other hand, CRS' port losses were only about 3.7% since these occurred only after the cargo was placed in their custody (that is, on top of the truck bed).

Tema: Security measures were grossly inadequate because of easy access to the port through areas not guarded by security personnel. Pilferage was more sophisticated and intensive, and reportedly included employees of the Ghana Cargo Handling Corporation, and those in charge of the sheds. In such cases, liability is almost impossible to determine since different officials from different agencies and jurisdictions are involved in the management of the cargo. In Tema, the stevedores belong to Speed Line, and the people working on the pier belong to Ghana Cargo Handling Corporation. Consignees are generally bounced back and forth between these two outfits and the shed personnel. A Striking Force, although present, was mostly ineffective in that the number of soldiers and the size of the crowds were disproportionate - the security people in Tema were overwhelmed by the size of the problem.

The Government of Ghana has taken several important actions to improve the management of the commodities:

1. The government, since it signed the agreement with CRS in 1980, formed a permanent subcommittee of the Cabinet in August 1980 to assist CRS/Ghana in its work in-country. The subcommittee is headed by the Minister of Presidential Affairs and includes the representatives of Labor and Social Affairs, Public Health, Education, Defense, and Trade.
2. The government allocated money directly to CRS to pay for the transportation so that CRS could hire truck drivers and use them at the port for the unloading. This money was made available through an imprest account in CRS' name. The government's first payment was ₵1,500,000 (about US \$545,455 at the official exchange rate). For the first year of operation, CRS spent approximately ₵2,200,000 and the government is to replenish the account against the presentation of accounting documents.
3. The government facilitated the hiring of private trucks in allowing CRS to pay the ton/mileage at a higher rate than the official.
4. Customs clearances and formalities, and authorized "bypassing" of the Port Authority sheds was also arranged.
5. Several agencies tried to improve security by sending more police and army.
6. The government accepted responsibility for some previous losses and it was expected that more than ₵250,000 would be collected from State Transport for those.

Each of these actions represents considerable concern by the present government. This intensive cooperation with CRS has already substantially reduced the losses.

The various on-the-spot actors did not believe that the described measures will be sufficient to control the stevedores for the following reasons:

1. The stevedores earned the same salary as an ordinary worker, or ₵12 a pay. The average family in Ghana numbers about seven and certainly the stevedores cannot feed their families at the price at which food was sold on the market. They therefore used every possible means to obtain some of the food they handle.

2. There was a belief that police and army sometimes may have been in connivance with some of the stevedores to get some food for themselves during this period of food scarcity although no evidence of that was found.
3. If the army were called in and ordered to be tough, CRS and the shipping line feared that the stevedore union would decide on a slowdown or a strike, which would be expensive in demurrage charges.

Of course, these are factors that must be taken into consideration but other measures have been suggested that may have a salutary effect:

1. Use pre-slung cargo so as to make it more difficult for the stevedores to rip the bags.
2. Use containers for oil and other expensive items. A study should be made on relative costs of losses and the cost of containers. This is apparently already under study for oil at the request of the CRS/Ghana director.
3. A stricter surveillance of the port entry. At the present time, nearly everybody can enter the port area. This should not be allowed.
4. Badges on special overalls should be designed to make the stevedores easily identifiable. All other persons should not be allowed on the ship, the quay, nor in a secure area that should be set around the ship during unloading.
5. More efforts should be made to screen and stop stevedores from leaving the ship with bags of sweepings.
6. Because of the gravity of the situation, the government should enter into negotiation with the unions. A raise in salaries of stevedores or some other compensation should be discussed.
7. It is evident that the police and army are not sufficiently organized to screen, observe, and control the action at the port. Special training should be offered.

Another problem is caused by the lack of timely information on the arrival of ships in Takoradi or Tema. First, the original bills of lading do not arrive on time and USAID does not receive a non-negotiable copy early enough. Second, the forecasting of a ship's arrival is generally incorrect, often not received, and

sometimes misleading. In the case of the Del Sol, for example, the local agency for Delta Line was unable to provide accurate information on that ship:

- On April 7, despite assurances that the ship was indeed arriving in Takoradi, UMARCO still refused to believe telex information. On April 8, CRS reconfirmed with their New York office that the Del Sol was arriving in Takoradi on the 9th. The agent continued to insist that she was only going to Tema.
- On April 10, UMARCO advised CRS that they would not book any stevedores until such time as they heard from the ship; therefore, no arrangements were made for security and off-loading of the vessel.
- On April 11, the ship arrived without communicating with shore. The captain later told the USAID director, FFP officer and the CRS director that "since nothing ever works in this place," he had decided not to try radio contact.

The same lack of information on the date of arrival of the Del Monte existed when the visit to the ship was planned for the evaluation team. The captain of the Del Monte said that he could not contact the Port Authority in Takoradi by radio.

It is suggested that until a better communication system is established in Ghana, the following measures be taken:

1. That CRS/NY request in their charter or contracts with shipping lines that the captain of the ships sent to Ghana advise CRS/Lome (Togo) of their estimated time of arrival (ETA) for transmittal to CRS/Ghana. Apparently, radio communications with Lome are possible, whereas Takoradi sometimes does not answer.
2. The Food for Peace office, AID/Washington, should send a circular to embassies on the West Coast of Africa to request direct relay to US Embassy/Ghana of any information given to them by the captains of ships with PL 480 food bound for Ghana, especially concerning their estimated time of arrival in Takoradi or Tema.

Unless some measures are taken to give the ETA to CRS/Ghana with enough time to hire trucks to be ready for the arrival of the ship, payment for trucks awaiting ship arrivals will be expensive. The lack of trucks present at arrival can cause demurrage charges for the shipping lines.

REVIEW OF 1980-81 SHIPMENTS

To investigate the claim that the new procedure adopted by the Government of Ghana and CRS reduced the losses incurred in the preceding years, all the available information was analyzed. The entire process of the programming of commodities by CRS, the flow of documents, and the logistics involved in the implementation of that program are presented.

To program food for Ghana, CRS/Ghana first prepares an Annual Estimate of Requirements (AER) and a plan of operation. This first estimate is reviewed by CRS headquarters and returned to CRS/Ghana. If the USAID director approves and signs the AER, it is sent to CRS/New York to be forwarded to FFP/Washington with the plan of operation. When FFP AID/Washington approves the AER, CRS/Ghana is notified and may then prepare quarterly calls forward; those must also be approved and relayed by USAID/Ghana to AID/Washington and CRS/New York. To illustrate the procedures and show the flow of commodities from the US to Ghana, figures and information were gathered and presented in three different tables for each of fiscal years 1980 and 1981.

Table 8 lists shipments received by CRS/Ghana according to program level and calls forward. This table gives the amount shipped to Ghana against the AER and calls forward by commodity. The figures are based on bookings and bills of lading and show that in FY 80, the statistics were:

1. 6339.47 MT (metric tons) of WSB were on AER and 4711.96 MT were shipped. There was a deficit of 1627.51 MT of WSB not called forward.
2. 5638.67 MT of SFSG were on the AER and 4841.69 MT were shipped. There was a shortfall of 796.98 MT.
3. 1032.84 MT of oil were on the AER and 1027.4 MT were shipped. In this case, a deficit of 5.44 MT were sent to Ghana.

Table 8 contains two entries on the totals line. The first lists the amounts according to the Ghana reports and is the sum of the manifests from the ships. The second, in parentheses, is the shipment amounts authorized by AID/Washington. While events prior to the arrival of the commodities in Ghana were not a part of this evaluation, some explanations were suggested by AID/Washington. CRS/Ghana had accumulated a considerable amount of the commodities in the warehouses in Ghana. Some adjustments were made in the calls forward, then, to allow for their distribution before more arrived. Too, some port losses could have occurred in the United States and the ships' manifests would show only the amounts actually loaded.

Table 9 was prepared to show the losses that occurred between the ship manifests and the amounts actually delivered to CRS. In

FY 80, the losses for SFSG were 19.4%, WSB 10.3%, and soy oil 2.5%. The figure for oil is misleading since only broken or totally lost cartons were counted in the loss. Each carton contains six one-gallon cans; if the carton is visibly intact, it is counted as delivered, even though there may be oily spots on the cardboard, indicating some degree of loss. Subsequent examination in the warehouse often showed that:

1. Some cartons were opened, a can removed, and the carton resealed.
2. Through the use of a trocar-like instrument, some cans were punctured through the carton and oil drained from one or more cans.
3. Many cans, because the metal is so thin, were partially crushed during the several loading/unloading operations; varying quantities of oil leaked from these cans.

One suggestion for this problem is the shipment of the cartons in large, presealed containers. The World Food Programme has begun use of this measure and tentatively reported substantial improvement over previous oil losses.

Table 10 was prepared to show the impact of the measures taken by the government and CRS to change the method of unloading the shipments in Takoradi. The sources for the figures shown on that table were USAID/Ghana, CRS/Ghana, and some surveyor's reports. This table gives a more detailed report on the unloading and the repartition of losses between shortlanded (responsibility of the shipping line) and port losses (responsibility of the government and CRS). It also shows the contrast between the amount of losses that occurred during the first six months of calendar year 1980, before the government and CRS agreed to change the procedures.

The results are evident. First, the port losses dropped from 15.8% during the first six months, to 1.36% during the last six months of the year. However, the shortlanded or shipping line losses increased from 2.58% to 3.02%. Altogether, the combined losses were reduced from 18% to 4.38%. The port losses by CRS seemed low.*

It is noted that the shipping line shortlanded liability increased instead of decreased during the last six months of 1980. For the whole year 1980, the losses, including shortlanded and port losses, were 13.9%, of which the shipping lines were liable for 2.74%.

*The way bills and surveyor's reports were not available for two ships so CRS estimates were used.

Table 8: FY 80 Arrivals in Metric Tons to CRS/Ghana against the FY 80 AER and AID Authorized Shipments

| Name of Vessel | Date | WSB MT | SFSG MT | OIL MT |
|--|------------------|---------------|-----------|----------|
| Delta Paraguay | 8/30/79 | | 46.2 | |
| Sakumo Lagoon | 11/16/79 | | 81.5 | |
| Delta Mexico | 2/5/80 | | 2067 | |
| Del Rio | 4/9/80 | | 678.5 | |
| Nisshin Maru | 10/3/80 | | 268.6 | |
| Delta Paraguay | 8/28/79 | | | 140.9 |
| Delta Argentina | 10/79 | | | 117.2 |
| Paladia | 2/10/80 | | | 272.6 |
| Del Sol | 4/20/80 | | | 204.4 |
| Victoria "U" | 9/30/80 | | | 294.1 |
| Sakumo Lagoon | 10/20/79 | 1586.9 | | |
| Victoria "U" | 2/19/80 | 1451.4 | | |
| Deloub | 4/2/80 | 29.5 452.9 | | |
| Adventure | 9/10/80 | 1177.9 | | |
| <hr/> | | | | |
| TOTALS | Ghana reports | 4698.6 | 3141.8 | 1029.2 |
| | (calls forward) | (4711.96) | (4841.69) | (1027.4) |
| <hr/> | | | | |
| AER Requests/A.I.D. Approvals | | 6339.47 | 5638.67 | 1032.84 |
| Difference between AER and calls forward | | -1627.51 | -796.98 | -5.44 |

NOTE: The amount of the commodities was reported by one source in metric tons and by another in bags/cartons. Calculations do not produce exact equivalents between them.

Table 9: FY 80 Shipments to CRS/Ghana According to Manifests and Surveyor/CRS Reports by Commodity

| Name of Vessel | Manifested | Shortlanded and Port Losses | Received by CRS |
|----------------------------|------------|-----------------------------|-----------------|
| WSB (No. of 50 lb. bags) | | | |
| Sakumo Lagoon | 69,970 | 10,940 | 59,030 |
| Victoria "U" | 65,295 | 3,380 | 61,915 |
| Del Rio | 19,971 | 5,272 | 14,699 |
| Adventure | 51,936 | 1,765 | 50,171 |
| Totals | 207,172 | 21,357 | 185,815 |
| % of Loss | | 10.3% | |
| SPSG (No. of 50 lb. bags) | | | |
| Sakumo Lagoon | 59,403 | 10,450 | 48,953 |
| Delta Mexico | 65,026 | 12,801 | 52,225 |
| Del Rio | 29,916 | 14,152 | 15,784 |
| Nisshin Maru | 55,936 | 3,412 | 52,524 |
| | 210,281 | 40,795 | 171,518 |
| *Delta Paraguay | 2,032 | | 2,032 |
| Totals | 212,313 | 40,795 | 171,518 |
| % of Loss | | 19.4% | |
| OIL (cartons of 6 gallons) | | | |
| Palladia | 13,009 | 487 | 12,522 |
| Del Sol | 9,762 | 57 | 9,705 |
| Victoria "U" | 13,940 | 404 | 13,536 |
| Totals | 36,711 | 948 | 35,763 |
| % of Loss | | 2.5% | |
| *Delta Paraguay | 6,763.2 | N/A | 6,763.2 |
| *Delta Argentina | 5,625.6 | N/A | 5,625.6 |
| Totals | 49,099.8 | | 48,151.8 |

*Delta Paraguay and Delta Argentina arrived in 1979; losses not available.

Table 10: Calendar 1980 Shortlandings and Port Losses by Ship with Percentages for Pre and Post Procedural Changes

| Name of Vessel | Commodity | Date | Manifested Quantity | Dis-charged | Short-landed (50 lb. bags) | Port Losses | Port Losses & Short-landed |
|----------------|-----------|----------|---------------------|-------------|----------------------------|-------------|----------------------------|
| Pre-Change | | | | | | | |
| Sakumo Lagoon | SFSG | 1/12/80 | 59,403 | 61,511 | (2,108) Excess | 10,450 | 10,450 |
| Victoria "U" | WSB | | 69,970 | 67,257 | 2,713 | 8,227 | 10,940 |
| Delta Mexico | SFSG | 3/31/80 | 65,026 | 62,679 | 2,347 | 10,454 | 12,801 |
| Victoria "U" | WSB | 4/25/80 | 65,295 | 65,243 | 52 | 3,328 | 3,380 |
| Del Rio | SFSG | 5/13/80 | 29,916 | 29,051 | 856 | 13,267 | 14,132 |
| Adventure | WSB | | 19,971 | 17,937 | 2,034 | 3,238 | 5,272 |
| Subtotals | | | 309,581 | 303,678 | 8,011 | 48,964 | 56,975 |
| % of Loss | | | | | 2.58% | 15.8% | 18% |
| Post-Change | | | | | | | |
| Palladia | Vegoil | 6/4/80 | 13,009-4871 | 12,522 | 379 | 309 | 688 |
| Del Sol | Vegoil | 6/21/80 | 9,762 | 9,705 | 57 | | 57 |
| Victoria "U" | Vegoil | 12/17/80 | 13,940 | 13,536 | 404 | 4 | 408 |
| Nisshin Maru | SFSG | 11/12/80 | 55,936 | 54,174 | 1,762 | 650 | 3,412 |
| Adventure | WSB | 12/6/80 | 51,936 | 50,171 | 1,765 | 8 | 1,773 |
| Subtotals | | | 144,583 | 140,108 | 4,367 | 1,971 | 6,338 |
| % of Loss | | | | | 3.02% | 1.36% | 4.38% |
| GRAND TOTALS | | | 454,164 | 441,678 | 12,486 | 50,953 | 63,315 |
| % of Loss | | | | | 2.74% | 11.2% | 13.9% |

Delta Paraguay SFSG 8/79: Figures on shortlanded and losses were not available.
 Delta Argentina oil 10/79: Figures on shortlanded and losses were not available.

The next set of tables is for FY 81. They are similar to those for FY 80 and were prepared with figures from USAID and CRS/Ghana, and with the surveyor's reports. They are more detailed, but not as complete as those for FY 80. The first (see Table 11) shows the AER requirements and what had already been shipped and booked, but concerns only the first three quarters of FY 81. The second table shows losses by commodities for the first two shipments. The losses rose from 4.23% in the second half of FY 80 to 12.7%, but the place and timing of those losses show that the shipping lines were more vulnerable than CRS. This appears more clearly on Table 12. It seems that the stevedores hired by the shipping line found out that with the shorter period of time for the direct unloading from the ship to CRS trucks, and storage of commodities in CRS warehouses instead of Port Authority warehouses, they only could pilfer in the holds of the ship or on the top of the loading trucks. The loss figure on that table shows that they had achieved some success.

The percentage of losses for the first two ships unloaded in 1981 rose to 7.49% for shortlanding and 5.27% for port losses. However, since CRS has resumed the rebagging of half empty bags, and taking into account the figures of the surveyors, the port losses should be only 3.48%. (See the explanation note on Table 13.)

These figures show that even if the losses are reduced, the problem of security still remained and CRS sent a letter to that effect to the Presidential Affairs Minister. A letter from that minister, assuring CRS that the government was aware of the problem and was going to act on it, was received during the evaluation team presence in Ghana. (Appendix B) At the same time, the shipping lines are protesting and some have decided that they would no longer carry shipments to Ghana. The new system and the cooperation of the government has not solved all the problems that the old system had accumulated, but definite improvements have been effected. (The continued problems are borne out in two recent newspaper articles from Ghana: both are exhibited at the end of Appendix B.)

In the middle of 1980, the warehouses at the port and the CRS warehouses were full of commodities, commingled with various previous shipments. Two reasons were given. First, the Ghana State Transportation Authority, which was supposed to transport the commodities, did not have trucks available in time and the quantity required. Second, payment of bills for transport and other inland expenses were made by the Ministry of Health and were made late. (The Ministry of Health did not have a fund from which to pay these and had to make a special request for them.) To overcome those problems, the government agreed that not only could CRS hire private trucks if the State Transport could not make enough available, but that CRS could also pay a higher ton/mileage rate if necessary. They also allowed CRS to pay truckers directly instead of going through the Ministry of Health. The Ministry of Finance and Economic Planning was designated as the primary

Table 11: FY 81 Shipments to CRS/Ghana according to AER
and Arrivals by Commodity

| Name of Vessel | Date | WSB MT | SFSG MT | OIL MT | BULGUR MT |
|---------------------|---------|---------------|---------------|--------------|-----------|
| *Del Sol | 3/6/81 | | 271.5 | | 142.9 |
| Del Monte | 4/4/81 | | 1057.1 | | |
| *Del Valle | 3/24/81 | | 666.7 | | |
| Duteous | 5/21/81 | | 770.6 | | |
| Victoria "U" | 5/24/81 | | 634.8 | | |
| Victoria "U" | 6/25/81 | | 1859.7 | | |
| Del Sol | 3/2/81 | | | 581 | |
| +*Del Sol | 3/8/81 | 1220.0 | | | |
| Blue Nagoya | 5/9/81 | | | 406.4 | |
| Blue Nagoya | 6/12/81 | | | 534.8 | |
| Del Monte | 3/8/81 | 453.7 | | | |
| Victoria "U" | 5/8/81 | 1072.8 | | | |
| Duteous | 6/25/81 | 181.2 | | | |
| X | X | 907.2 | | | |
| Total shipped | | 3835.7 | 5260.4 | 1522.2 | 142.9 |
| Fourth Quarter | | <u>1259.0</u> | <u>2208.0</u> | <u>408.2</u> | <u>0</u> |
| Total to be shipped | | 5094.7 | 7468.4 | 1930.4 | 0 |
| AER Request | | 5376.0 | 7816.4 | 1998.1 | 150.4 |

+*May Del Sol totaled WSB 1220.8 - reported in 3 separate lots.

*The only shipments that had arrived in Ghana by the end of the field work are those marked with an asterisk. The other shipments, except the last one (indicated by X), were enroute. The shipment of the fourth quarter had not yet been booked.

Table 12: FY 81 Arrivals to CRS/Ghana according to Manifests and Surveyor/CRS Reports by Commodity

| Name of Vessel | Manifested | Shortlanded and Port Losses | Received by CRS |
|---------------------------|------------|-----------------------------|-----------------|
| WSB (No. of 50 lb. bags) | | | |
| Del Sol | 53,110* | 4,496 | 48,614 |
| % of Loss | | 8.45%** | |
| SFGS (No. of 50 lb. bags) | | | |
| Del Sol | 11,970 | 2,371 | 9,599 |
| Del Valle | 29,398 | 4,935 | 24,463 |
| Subtotal | 41,368 | 7,306 | 34,062 |
| % of Loss | | 17.6%* | |
| BULGUR (No. of bags) | | | |
| Del Sol | 6,300 | 1,066 | 5,234 |
| % of Loss | | 6.92%* | |
| TOTAL | 100,778 | 12,868 | 87,910 |
| % of Loss | | 12.76%* | |

*This shipment was reported as 1,200.8 MT in Table 11; an actual calculation would convert that amount to 53,715 bags. The source of the disparity could not be determined. The same problem exists in Table 13.

**This percentage of average losses is to be reduced when the rebagging of partially empty bags is taken into consideration. As indicated in the succeeding table, the amount of actual losses should be $12,868 - 1,805.5 = 11,062.5$ or 10.97%, of which 7.49% is the responsibility of the shipping line.

Table 13: FY 81 Shortlandings and Port Losses by Ship per Number of Bags and Percentages

| Name of Vessel | Commodity | Date | Manifested Quantity | Short-landed | Port Losses* (Partially empty) | Port Unfit | Balance |
|----------------|-----------|---------|---------------------|------------------|--------------------------------|--|---------|
| | | | | (number of bags) | | | |
| Del Sol | WSB | 4/12/81 | 53,110 | 2,671 | 1,825 | 1,053 | 48,614 |
| | BULGUR | 4/12/81 | 6,300 | 765 | 303 | 202 | 5,234 |
| | SFSG | 4/12/81 | 11,970 | 1,171 | 1,200 | 529 | 9,599 |
| Dell Valle | SFSG | 4/27/81 | 29,398 | 2,948 | 1,987 | 1,182 ½ 430 ½ | 24,463 |
| TOTAL | | | 100,778 | 7,555 | 5,315 | 12,868 | 87,910 |
| % of Loss | | | | 7.49% | 5.27% | (3.48% after rebagging partially empty bags) | |

*The Port Losses, however, are to be reduced because CRS rebagged the partially empty bags. Consequently, as the surveyor indicated 2,966 partially empty bags, the losses should be reduced by $2,966.2 = 1,483$, and 430 bags three-quarters full or 322.5 bags. Thus a total of $1,483 + 322.5$ or 1,805.5 should be subtracted from the 5,315 bags indicated as port losses. The port losses would then be estimated at $5,315 - 1,805.5 = 3,509.5$ or 3.48% to be considered as wear and tear.

cooperator with CRS for the distribution of Food for Peace in Ghana. The new arrangements allowed CRS to expedite the movement of most of the stock in the warehouses that had become commingled. It also helped to cut down the spoilage and other losses due to the amount of food that had accumulated in warehouses in 1980 and could not be evacuated by government trucks on which CRS was then dependent. At the end of July 1980, 76,768 units of food had accumulated in the Takoradi port sheds and 96,915 units in a Kumasi warehouse. This combination made it very difficult, if not impossible, to reconcile those stocks with the shipments and losses. Figures given by CRS show that with the new procedure, those stocks were distributed. The first quarter FY 81 commodities, totalling 2,705.4 MT, were evacuated from the port into secure warehouses in an average of four days for each ship, or 225.45 MT a day, compared to the first half of 1980 when port evacuation had averaged 140 MT a day.

DISTRIBUTION TO THE CENTERS

CRS/Ghana also reported that the new system had greatly facilitated the distribution of the Food for Peace commodities to the centers. They cited, for example, that with the most recent ships, 59% of the discharged quantities had been distributed to the centers within 10 days; they did not report how long it took to distribute the rest. The director noted specifically that a prime objective of the present system was to move the foods as rapidly as possible from the warehouse in order to reduce the opportunities for pilferage and spoilage. The new arrangement should facilitate the accomplishment of that objective.

The present system for the allocation of the commodities by CRS to the centers involves the following steps:

1. Each center provides a document or an update of a previous document that justifies the amount of rations needed by examining the number of participants served.
2. CRS then enters into a signed agreement with the center that contains the number of authorized participants to be served.
3. Additionally, a letter of authorization is issued by CRS to the centers that specifies the number of participants and the rations to be issued.
4. A list of the authorized participants is maintained in the Accra office and at the CRS dispatcher's office.
5. When a ship manifest is received, the quantities on the manifest are distributed among the centers (not every center will necessarily receive an

allocation from every manifest). A copy of each distribution list is sent to the Food for Peace office at USAID/Ghana.

6. An advance notice is then prepared for each center on the distribution list and is mailed to the center.
7. The dispatcher loads trucks with the allotments for one or more centers and issues a waybill in triplicate for each consignment to each center.
8. The trucker delivers each consignment, the center manager checks the delivery, signs the waybill, and notes any differences between that document and the delivery, including any broken, missing, or spoiled commodities.
9. The center manager then enters the amount of commodity received on the commodity tally card and mails a copy of the waybill to CRS in Accra. A report on any losses or spoilage is also sent to CRS with an explanation and documentation of disposal of spoiled foods.

The value of any shortages from the deliveries is deducted from the truckers' ton/mileage payments. Spoiled foods, when authorized, may be sold for poultry or livestock feed, and the money recovered is returned to CRS. In a few cases, spoilage is so severe that the commodity must be destroyed; again, authorization is required.

Center managers prepare a status report each month that details the amount of each commodity on hand at the beginning of the month, the amount distributed, and the inventory at the end of the month. This report is submitted to the CRS office by mail, is handed to the regional supervisors, or is carried by hand if the manager is making a trip to Accra for some other purpose.

The procedures are systematic and should provide appropriate checks for reconciling inventories and making new allocations. Despite the systematized approach, many problems plague the delivery of the commodities and their receipt by the centers. A major obstacle is the deteriorated communications within the country. Many roads have not been adequately repaired for years; they are often full of holes and breaks in the asphalt, the gravel roads have sometimes degenerated to dirt tracks, and some can no longer be utilized, especially during the rainy season. Mail delivery is usually slow and often uncertain. The telephone system functions sporadically and inefficiently. Radio and telegraph communications are scarce and non-existent in some areas. These infrastructure problems greatly hamper the administration of the food distribution system.

The evaluation team studied the delivery system through several approaches: a document study of the center authorizations, the

distribution lists, the agreements, the advance notices, the monthly reports of the centers, and their tally cards; interviews with the Accra officials of CRS, the CRS dispatcher in Takoradi, the center managers, and with three truckers; and physical inventory checks on the commodities on hand in the centers' storage.

In addition to the infrastructure difficulties, three kinds of difficulties were found but they were not always discrete contributions to the distribution problems; usually they were interrelated. The discussion of them, then, must necessarily commingle factors from the three sources.

One flaw in the distribution system is that in some cases the number of authorized and actual participants did not coincide. For example, among those centers with data in Table 14, 14 had about the same number of authorized and actual recipients; 8 had more recipients than authorized; and 22 had fewer recipients than the number authorized. Some of the differences were due to seasonal participation (in that same table, not the variations across the months). In other cases, the center ran short of food and therefore some mothers did not receive rations for their children. In still others, no oil was available and some mothers did not go to the clinic because they knew there was no oil. Some of the clinics were badly out of balance; several in the Upper Region and some of the hospitals were serving so many more children than the rations allocated that they had to sharply reduce the amount of the commodities that were being handed out.

In addition to these differences reported by the centers, others always reported the authorized number regardless of how many children were served in the clinic. In three of those in the table, the evaluators compared the number of "dots" on the Growth Surveillance System master charts to the number of children served that day. One was almost exactly correct; one had only 61% of those served indicated; the third had 72% marked. The first case entered the exact number served on the report form; the other two listed the authorized number. The harried workers, trying to perform all the necessary tasks while hundreds of mothers and children were waiting, accounted for many of the omissions. In any event, this factor contributed to the imbalance in the supplies of commodities among the many centers.

As previously noted, the mail system is slow and uncertain. It is therefore difficult for CRS to utilize the monthly reports to update the distribution lists. Some centers were behind with their reports, further complicating the task. The sizeable differences between the reportings and the authorized numbers, and consequently the distribution lists, suggest that some scrutiny of these documents is in order, even though they may arrive late. Check-ups by field personnel could be used to supplement the monthly reports. Since some centers had little or no food and others had more than they needed for the quarter (the director reported that in a few cases a truck had been unable to unload because a center had no more storage room), some improvement in the existing

Table 14: Comparison of Actual Recipient Levels with Authorized Recipient Levels in Selected Title II Distribution Sites in Ghana, January to April, 1981

| Center Code | Type of Program | Authorized Recipient Level | Program Attendance Figures | | | |
|-------------|-----------------|----------------------------|----------------------------|--------|--------|--------|
| | | | JAN 81 | FEB 81 | MAR 81 | APR 81 |
| 1 | MCH | 600 | 364 | 364 | 364 | NA |
| 1 | (OCF)* | (None) | 120 | 120 | 120 | 120 |
| 2 | OCF | 110 | 76 | 74 | 79 | 70 |
| 3 | MCH & OCF | 1,200 | 1,428 | 1,428 | 1,428 | 1,478 |
| 4 | SF | 100 | 43 | 43 | 43 | 43 |
| 5 | OCF | 150 | 150 | 150 | 150 | 150 |
| 6 | MCH & OCF | 3,850 | NA | NA | NA | 5,172 |
| 7 | MCH | 800 | 600 | 624 | 766 | 800 |
| 8 | MCH | 1,000 | 1,000+ | 1,000+ | 1,000+ | 1,000+ |
| 9 | MCH | 1,800 | 1,464 | 1,469 | 1,612 | 1,628 |
| 10 | MCH & OCF | 3,800 | 2,659 | 2,449 | 2,703 | 2,123 |
| 11 | MCH | 700 | 700 | 700 | 700 | 700 |
| 12 | MCH & OCF | 990 | 1,042 | 996 | 987 | 887 |
| 13 | MCH | 300 | 300 | 300 | 300 | 300 |
| 14 | SF | 200 | 200 | 150 | 150 | 150 |
| 14 | OCF | 80 | 100 | 100 | 100 | 100 |
| 15 | OCF | 120 | 100 | 100 | 100 | 105 |
| 16 | MCH | 1,000 | 871 | 849 | 887 | 767 |
| 16 | SF | 400 | NA | NA | NA | NA |
| 17 | SF | 160 | 160 | 160 | 160 | 160 |
| 18 | MCH & (OCF)* | 600 | 378 | 572 | 651 | 318 |
| 19 | MCH | 100 | 104 | 118 | 98 | 121 |
| 20 | MCH | 1,200 | 517 | 669 | 860 | 892 |
| 21 | SF & OCF | 500 | 750 | 750 | 750 | 750 |
| 22 | MCH | 200 | NA | NA | NA | NA |
| 23 | MCH & (OCF)* | 1,000 | 712 | 892 | 901 | 1,096 |
| 24 | SF | 500 | 352 | 352 | 352 | 352 |

... continued...

**Where OCF or SF figures appear in parentheses, that number of children was being fed although the distribution list from ORS did not indicate an allocation for OCF or SF.*

Continuation Table 14: Comparison of Actual Recipient Levels with Authorized Recipient Levels in Selected Title II Distribution Sites in Ghana, January to April, 1981

| Center Code | Type of Program | Authorized Recipient Level | Program Attendance Figures | | | |
|-------------|-----------------|----------------------------|-----------------------------------|--------|--------|----------|
| | | | JAN 81 | FEB 81 | MAR 81 | APR 81 |
| 25 | MCH | 800 | NA | NA | NA | 175 |
| 25 | (OCF)* | (None) | 50 | 50 | 50 | 100 |
| 26 | MCH | 400 | 160 | 160 | 160 | 160 |
| 27 | MCH | 3,300 | NA | 2,387 | 2,585 | 1,756 |
| 28 | SF | 2,500 | 3,000 | 3,000 | 3,000 | 3,000 |
| 29 | SF | 3,000 | 3,000 | 3,000 | 3,000 | 3,000 |
| 30 | MCH | 1,000 | 1,000 | NA | 955 | 195 |
| 30 | (SF)* | (None) | 200 | NA | 263 | 96 |
| 31 | MCH | 2,000 | NA | 2,476 | 1,776 | 1,224 |
| 32 | MCH | 100 | 32 | 28 | 34 | 30 |
| 33 | SF | 400 | NA | NA | NA | NA |
| 34 | MCH | 400 | 329 | 445 | 447 | 299 |
| 35 | MCH | 2,000 | 2,421 | 1,834 | 1,389 | 1,068 |
| 35 | OCF | 300 | 335 | 335 | 335 | 335 |
| 36 | MCH | 1,000 | NA | NA | NA | NA |
| 36 | OCF | 300 | NA | NA | NA | NA |
| 37 | MCH | 300 | (Closed down acc. to CRS records) | | | |
| 38 | MCH & OCF | 1,000 | NA | NA | 995 | Vacation |
| 39 | MCH | 700 | 200 | 200 | 200 | 280 |
| 39 | OCF | 120 | NA | NA | NA | NA |
| 40 | MCH | 1,000 | 398 | 750 | 1,011 | 865 |
| 41 | MCH | 1,500 | 1,423 | 1,176 | 1,141 | 1,169 |
| 42 | MCH | 600 | 243 | 260 | 308 | 327 |
| 43 | MCH | 1,000 | 862 | 881 | Closed | 729 |
| 43 | OCF | 500 | 468 | 504 | Closed | 489 |
| 44 | SF | 300 | 552 | 552 | 552 | 552 |
| 45 | MCH | 1,000 | 695 | 797 | 1,048 | 631 |
| 46 | SF | 150 | 130 | 130 | 130 | 130 |

*See note on previous page.

NOTE: The attendance figures did not always reflect the amount of food distributed from a center. Multiple feedings were seen in some of the malnutrition wards, as well as school feeding and day nursery programs visited by researchers, and other centers may also have followed this practice.

measures or the addition of some new ones, could bring the supplies in better balance across the country.

Every sampled center reported that it had a period during the past twelve months when it was either without commodities or had so little on hand that it had been necessary to sharply reduce the amount issued to the participants. While that period had been only about a month for half the sample centers, most of the others had been without or sharply reduced for two to seven months.

Table 15 shows the reported actual participants for the month of May 1981, and the amount of the commodities on hand at the time of the inspection (last week of May to first two weeks in June). A few had enough to serve the participants for a month or more, a few for a couple of weeks and some had little or none. It

Table 15: Center Reported Participants and Supplies Inventoried in Late May - Early June, 1981

| Partici- pants | SFSG: sacks | Vegoil: gallons | WSB: sacks | Partici- pants | SFSG: sacks | Vegoil: gallons | WSB: sacks |
|-------------------|----------------|--------------------|---------------|-------------------|----------------|--------------------|---------------|
| 750 | 0 | 0 | 0 | 300 | 0 | 160 | 0 |
| 1098 | 258 | 1230 | 0 | 450 | 37 | ? | 46 |
| 200 | 23 | 30 | 0 | 400 | 75 | 216 | 20 |
| 2700 | 120 | 0 | 0 | 1776 | 75 | 0 | 141 |
| 100 | 28 | 11 | 0 | 900 | 0 | 0 | 42 |
| 500 | 22 | 12 | 58 | 2300 | 529 | 400 | 336 |
| 1200 | 324 | 0 | 224 | 1000 | 213 | 0 | 0 |
| 800 | 106 | 0 | 93 | 5716 | 334 | 0 | 316 |
| 631 | 0 | 101 | 60 | 600 | 0 | 5 | 0 |
| 1571 | 156 | 198 | 150 | 1096 | 41 | 0 | 311 |
| 500 | 88 | 30 | 97 | 800 | 333 | 53 | 58 |
| 100 | 9 | 0 | 4 | 400 | 109 | 59 | 76 |
| 160 | 7 | 5 | 15 | 1620 | 182 | 105 | 61 |
| 65 | 3 | 40 | 0 | 700 | 0 | 42 | 0 |
| 700 | 0 | 354 | 14 | 400 | 0 | 0 | 0 |
| 300 | 15 | 0 | 118 | 1400 | 207 | 0 | 327 |
| 130 | 12 | 8 | 0 | 1250 | 18 | 339 | 1 |
| 1200 | 87 | 264 | 0 | 4246 | 650 | 648 | 0 |
| 300 | 0 | 0 | 160 | 200 | 36 | 16 | 0 |
| 2000 | 65 | 276 | 164 | 1557 | 89 | 120 | 0 |
| 500 | 140 | 186 | 362 | 400 | 11 | 76 | 122 |
| 300 | 8 | 13 | 113 | 1200 | 31 | 0 | 459 |

Note: 1 sack WSE or SFSG weighs 10 pounds. At the standard ration (2K each of WSE and SFSG, 1 liter of oil), 1 sack of the two grains would be served to about 23 children per month and the oil would serve 4 children per month per gallon.

should be noted that some deliveries were being made at the time of the inspection and a ship came in during the study period; nevertheless, the distribution was clearly uneven among the authorized centers.

Some of these distribution problems arose from the CRS procedure of basing the distribution list on the ship manifests; port and other losses reduced the listed amount in varying percentages, thus not all the centers on a distribution list could receive the commodities. Others reportedly were because some truckers do not want to deliver to some sites, especially the short hauls (although the survey of the sample centers showed about as many problems for long haul centers as for short haul locations). Another documented problem was the dispatching itself; in three sites, one center received commodities while another in the same location received none from that truck even though the truck still had commodities on board and was traveling to still another location. Not only did these cases result in considerable inequities in supplies, but also caused increased transportation costs since, presumably later, another truck would bring commodities to the neglected center in that location.

CRS noted in several documents that it "was reducing the amount of school feeding in the program." As a generality, the schools were either short of commodities or had none at all. The FY 81 agreements with those schools, however, had not reduced the authorized participants. If the announcement were being put into practice, it would account for some of the low or absent inventories. On the other hand, there were indications in several documents that CRS/Ghana intended to augment its program of "other child feeding," chiefly day care centers and hospitalized children. Some day-care centers were being served that were not on the lists and had no agreements as yet. Other day-care centers, however, were without food or had had extended periods with little or none. The most frequent deficiency was found in the programs that served hospitalized children; several had little or no food for these ill children.

Finally, the double rations authorized for the Upper Region were not only impossible, considering the amount of rations received, but the sample centers had not even been able to distribute a full single ration. Transportation to that region is always difficult, especially during the rainy season. Many truckers manage to haul other foods, gasoline, and other goods to that region. Many center managers reported that they made regular trips to the capital from the Upper Region. The unusual incidence of malnutrition among children in that area, coupled with the onslaught of another drought, make reexamination of the dispatching system imperative.

While closely related to the described problems of the distribution lists, nearly every sample center had one or more advanced notices that had not yet been filled; it should be noted that some

were months overdue. Delayed arrival of ships was a part of the problem, as evidenced from the data on the AER amounts and those received by CRS: not enough had arrived. Centers were quite concerned with their "unfilled advance notices," particularly if they were long overdue; additionally, some had recently received advance notices for the first quarter of FY 81 and they were already well into the third quarter. Information to the centers on the problems of deliveries, if they are to be made later, would allay their fears or at least allow them to parcel out their existing commodities through better planned rations.

CRS FIELD SUPERVISION

Public Law 480 stipulates that the contracted voluntary agency must supervise the distribution of the commodities. In the orientation meeting with CRS/Ghana, it was emphasized that the amount of that supervision in Ghana was considerably limited because of the independent status of the distributing organizations. A copy of the agreement with the centers was provided and is included in Appendix E. The provisions therein appear to meet the requirements of the law. The only portion of the programs that would appear to be outside the purview of CRS/Ghana monitoring would be the nutrition education program; all others are covered in the agreement.

The Accra office of CRS, in its FY 82 program plan, stated that "supervision capacity is already in force." That same document noted that 638 supervisory visits had been made in 1980 to 410 distribution centers. That would amount to 1.6 per site per year, if all were visited equally. Thirty-seven of the fifty-five monitored sites reported one visit in the past twelve months; six stated that two had been made; one said it had been "visited several times." Of the remaining eleven sites, one had not been visited in ten years, five for three years, and the managers were new in the others and did not know about previous visits. The 638 reported supervisory visits in 1980 would amount to about 80 per year per supervisor if none of those visits were made by the rest of the CRS staff; excluding vacation and Accra seminar periods, that would amount to about two per week. It should be noted, however, that some center managers reported that they sometimes saw the supervisor informally, that they themselves sometimes visited the supervisor, and that some also conferred with CRS staff members in the Accra office. The regional seminars would also increase the personal communication between CRS and center managers.

While supervisors have many tasks to perform during a visit to a center, an important one in light of the discrepancies found in the USAID inspections of the tally card amounts and the physical inventories, would be to help center managers with these. In the centers reporting a supervisory visit, the tally cards had been

signed by the supervisor, apparently indicating they were in balance with the physical inventory, although that was by no means the case. In one inspection carried out by a supervisor in the presence of the evaluation team, the tally card was signed without checking the physical inventory, and the two did not agree. In two other instances, the tally cards had been signed, no commodities had been issued since then, and the tally cards and physical inventories differed considerably. It would appear advisable to conduct these checks, discuss any discovered problems, and assist the center manager to institute a more accurate system when needed.

Finally, on several occasions, CRS employees called attention to their limited authority with centers, to the independence of the centers, and in other ways expressed concerns that could be interpreted as reducing their supervisory functions. It was even categorically stated that the evaluation team would not be able to talk to, much less study, some of the sites without permission from various authorities. While there may be some undiscovered past history that brought about these feelings, the experience of the evaluation team was that the opposite was true; the centers welcomed the team, showed them all their records and inventories, freely discussed their strengths and weaknesses, and welcomed suggestions and other assistance. That experience should encourage CRS personnel to have more frequent and indepth contact with the centers. There were problems they could help solve. Most importantly, the centers felt a need to talk to someone about their programs; discussions with a knowledgeable CRS staff member would help them understand the system and its difficulties better even if they couldn't solve them immediately.

USAID MONITORING

Public Law 480 requires that each USAID mission review and concur, when in agreement, with the Annual Estimated Requirements and the Program Plan of the voluntary agency contracted to perform the Food for Peace Title II functions. The regulations specify the procedures for reconciling differences between the two organizations. Since concurrence, or lack of it, requires a considerable knowledge of the program and its operations, most missions conduct substantive reviews with the voluntary agency, monitor the various phases of the work, and provide the Washington, DC, office of Food for Peace with the necessary information.

Apparently some confusion about the USAID functions arose at some point in the Ghana operation. The lack of a Food for Peace officer for a period of time in the past probably complicated the ongoing functions. The replacement of several other USAID officials through rotation and promotion may have contributed to the discontinuity. Even after the appointment of a Food for Peace officer, the monitoring of the Food for Peace program did not meet its full potential. Disagreements over whether or not to make center monitoring visits and the way those were to be conducted, and the lack of a field vehicle limited the USAID supervisory activities.

After a great deal of discussion between CRS and USAID, monitoring was resumed. Inspection to the ports during the unloading of ships, visits to the warehouses, and the exchange of documents between the two organizations furthered the work. During the last half of 1980, some monitoring of distribution centers was also done. A report on differences between the tally cards and the physical inventories, discovered during the center monitoring, sparked a new controversy. Until the USAID Food for Peace personnel accompanied the evaluation team to its sample sites, no monitoring had been conducted in calendar year 1981. When the evaluation team left Ghana in mid-June 1981, it appeared that some of the previous difficulties had been resolved and that USAID/FFO monitoring would then be reinstated.

The evaluation team must emphasize the desirability of the mission carrying out its supervisory functions. First and foremost, it provides the necessary information so that USAID and CRS can operate as a team in the very vital Food for Peace program in Ghana. Some joint projects can be engendered. Resources for others can be found through the efforts of both agencies that might not be possible by either one alone. Too, since the staffs of both USAID and CRS are quite limited, cooperation could ease the burden of each.

Several provisions of PL 480 place a considerable legal responsibility on the USAID staff. Serious problems can result if a mission acts, or does not act, on the basis of concrete information about the program. One example of what can occur can be seen in the FY 80 and FY 81 AERs, both of which received concurrence by the USAID/Ghana mission. In each of those documents (copies available in Appendix C), MCH-Mother participants are listed and rations requested for them. Not only were the centers not authorized to issue rations to mothers in FY 81, but the centers reported that that had been the case for several years. The origin of the divergence between the AERs and the actual program could not be traced but two officials said they thought that "a tacit agreement" about that had been reached: Food for Peace/Washington knew nothing about such an agreement.

It must be pointed out that as nearly as the evaluation team could ascertain during its short study time, the rations intended for MCH mothers and children were being distributed, all of them to children. This discussion in no way means to imply that the rations were not distributed to recipients. Nor does the team necessarily disagree that all the rations should go to children. The team does suggest, however, that the AER accurately reflect what is being done in the program and that USAID/Ghana be assured of that before it concurs with such documents.

This section of the report also should not be construed to mean that USAID/FFP must conduct a full scale evaluation of the program every year. That is, of course, impossible, given the limited staff and other resources available. It should be clear, however, that the mission has an obligation, both to CRS and to the US

Government, to carry out a reasonable set of monitoring activities that will assure both agencies of the best possible implementation of the Food for Peace program in Ghana.

IMPLICATIONS FROM THE STUDY OF THE CENTRAL OPERATIONS

The 1978 and 1979 extensive losses of the Food for Peace Title II commodities, the suspension of deliveries to Ghana for a period of time, and the audit by the US Government had combined to put a high priority on tightening the operations at the unloading of the ships, the warehousing, and the transportation of the foods to the distribution centers. About a year before the evaluation, Catholic Relief Services named a new director who vigorously worked toward the improvement of those operations. A major success was the signing of an official agreement between CRS and the Government of Ghana and the assignment of the cooperative activities to the Ministry of Presidential Affairs.

The principal management changes emanating from the new agreement included tightened port security, unloading the commodities directly onto contracted trucks, the provision of a CRS controlled warehouse, and the use of contracted trucks to transport the foods to the distribution centers. The changes, inaugurated in mid-1980, resulted in a reduction of the port losses from 18% in the first half of the year to about 4.5% afterward. In early 1981, the losses rose somewhat, approximating 11%, of which the shipping line was liable for 7.5%. The dock workers had learned how to circumvent the new procedures and were again able to obtain the commodities, even though still not in the same quantity as in previous years.

Reviews by the evaluation team with appropriate officials of the Government of Ghana and Catholic Relief Services, of the changes in the operations, the early reductions, and the subsequent rises led to several recommendations for consideration in further improvements of the port operations:

Recommendations:

Use pre-slung cargo arrangements so as to make it more difficult for the stevedores to rip the bags.

Use seagoing containers for oil and other expensive items if the costs are less than those incurred through the losses.

Institute a stricter surveillance of the entry of the port to allow entrance only to those with official business.

Provide badges on special coveralls to make the stevedores more easily identifiable from other persons that enter the port area.

A screening system should be instituted at the entry points to prevent the stevedores from leaving with what they call sweepings.

All sweepings should be declared the property of CRS.

The Government of Ghana should enter into negotiation with the unions to provide a more realistic wage for their labor and thus reduce the incentive to steal the commodities.

The Government of Ghana should provide special training for the police and military forces used to guard the port so that they are better organized to screen the entrants, observe the operations, and control the movement of people and the commodities.

A second part of the problem of managing the commodities in the port area was that of the failure of communications about the arrival of ships with Food for Peace commodities on board. Ship captains complained that they could not radio the port authorities, the shipping agent appeared to have differing messages from those received by CRS, and the problem resulted in ships arriving with little or no prior notice. Demurrage charges were high and unloading slow when not enough crews and trucks were available to unload the ship. Since some of the difficulties appeared to be difficult to overcome, recommendations for some alternative communications included:

Recommendations:

CRS/NY should request in their charter or contracts with shipping lines that the captains advise CRS/Lome (Togo) of their estimated time of arrival for transmittal to CRS/Ghana and/or to USAID/Togo.

The Food for Peace office, AID/Washington, should send a circular to embassies on the West Coast of Africa to request direct relay to US Embassy/Ghana of any information on the estimated time of arrival of ships carrying PL 480 commodities bound for Ghana.

Due to the pressures of time for the study and the introduction of recently arrived commodities into the CRS controlled warehouse, no calculation of possible losses within that warehouse and as the commodities were loaded on trucks for transportation to the distribution centers was possible. Since losses at any point reduce the amount of food available to the recipients and because the knowledge of all losses can help CRS better plan its distribution, the evaluation team suggested a follow up study of that part of the system.

Recommendation:

USAID/Ghana, in conjunction with CRS/Ghana, should carry out a study of the quantities of commodities that go into

the warehouse, the conditions therein, the loading of foods on to the contracted trucks, calculate the losses involved, and institute procedures for reducing those losses.

CRS/Ghana utilizes the ship manifests it receives to prepare distribution lists for the centers. Those manifests, of course, do not take any losses into account. Advance notices, based on the distribution lists, are then mailed to the distribution centers. Because of the losses, some advance notices are not filled; the centers expect to receive the commodities but receive them very late or not at all, greatly complicating their management of the commodities.

Recommendation:

CRS/Ghana should adopt a reasonable loss percentage, based on the recent history of those, and prepare its distribution lists and advance notices so that they more nearly match the quantities that can be delivered.

The distribution centers receive the commodities from the trucks, store them, and issue them to the recipients. They maintain records of the commodities in their storage, those issued, and the number of recipients served each month. Reports are mailed to CRS/Ghana each month on these quantities. While only a few centers were found to be tardy in submitting their reports, because of the slow and uncertain mail service, CRS reported that it could not depend on the monthly reports to help them in the preparation of the distribution lists and the advance notices.

The centers, however, had received and were storing vastly differing amounts of the foods. Some of that difference was due to the way the distribution lists were prepared, resulting in some centers being short of the commodities. Other problems were detected: although no request for additional commodities had been submitted, some centers received authorization for additional quantities; some centers had more recipients than their authorized levels and others had fewer; although some centers reported large amounts of food on hand, they continued to receive commodities.

Recommendations:

CRS/Ghana should check the participant levels carefully and adjust the authorizations accordingly so that the commodities sent more nearly match those needed.

CRS/Ghana, despite the slowness of mail service, should review the center monthly reports as soon as possible, and modify the distribution according to the quantities on hand through CRS supervision, updates on center recipients and commodities should help CRS adjust the shipments.

Even taking the previously discussed manifest/distribution list and the mail problems into account, there were unexplained deficiencies in the distribution system. The dispatch on the loads on the trucks caused some of the inequities; trucks went to some centers in a location, delivered commodities to that center, but did not deliver to one or more other centers in the same location.

Recommendation:

CRS/Ghana should study and reform the dispatch system to make it more efficient and to accomplish more equitable distribution of the commodities.

This recommendation would not only improve the potential nutritional impact of the commodities but it would also decrease the costs of transporting the foods to the centers, a cost borne by the Government of Ghana. A part of the dispatch problem is the bad roads into many areas and the preference of the truckers for certain destinations. Gasoline shortages and the lack of parts for the repair of vehicles are also involved. Nevertheless, chronic shortages of the commodities were experienced by some centers, resulting in periods of time with no commodities and/or reductions in the amounts of food issued to very low levels. Some centers with large numbers of severely malnourished participants, especially some hospitals and most centers in the Upper Region, had experienced shortages often and some for extended lengths of time. The transportation problems exist but many high risk recipients are being served inadequately.

Recommendation:

CRS/Ghana should assign a high priority in its dispatch system to those centers, and particularly to the Upper Region, with large numbers of severely malnourished children.

Many centers had large amounts of the commodities and low numbers of severely malnourished children. Bringing the dispatch system more nearly into balance would help Food for Peace meet its objectives.

The distribution programs consisted of Maternal Child Health-Child, School Feeding, and Other Child Feeding (mostly day-care centers). Some of each was found to be experiencing or have experienced shortages of the commodities. The shortages in many School Feeding programs had been more severe and for greater periods of time than for the others. Some day-care centers had also suffered from shortages. CRS/Ghana and USAID/Ghana verbally indicated a desire to reduce the distribution to the schools and the day-care centers although the FY 82 Annual Estimate of Requirements contained no reduction. In any event, the schools and day-care centers had authorization letters and advance notices that appeared to be in keeping with the previously requested amounts of commodities. Many were by no means able to distribute the prescribed rations.

Recommendation:

CRS/Ghana should dispatch commodities to the schools and day care centers commensurate with the letters of authorization in so far as possible; if a decision has been made to reduce distribution to them, that should be made known to those programs and the Annual Estimated Requirements should be lowered accordingly.

The 1980, 1981, and 1982 Annual Estimated Requirements documents clearly requested commodities for distribution to Maternal Child Health mothers and children. Not only were no commodities being distributed to mothers during the evaluation, the centers reported, unanimously, that they had not been allowed to issue rations to mothers for many years.

Recommendation:

The Annual Estimated Requirements documents and all other reports should clearly reflect the actual operations in the program; CRS/Ghana should either issue rations to mothers or cease including rations for them in their requests.

All of the rations were being distributed; the recommendation does not infer that they were not. Further, the evaluation team does not necessarily disagree with the decision to issue all the commodities to children rather than to mothers; it does disagree with incorrect information being included in official documents.

The CRS/Ghana staff included regional supervisors to carry out that PL 480 requirement. A few centers reported multiple visits from the supervisors, most noted one visit during the last year, and some had not been monitored for extended periods of time. The CRS reported visits averaged fewer than two per week per supervisor; those staff members obviously had other duties but even taking those into account, the number of monitoring visits appeared very low. Further, the center managers welcomed monitoring visits and often needed assistance of some sort.

Recommendation:

CRS/Ghana should schedule monitoring visits for its supervisors so that every center can be monitored at least two times per year.

CRS acknowledged some center management and reporting problems in several of its documents. The evaluation team findings concurred with their existence and they are described in the next two chapters. Incomplete monitoring by the CRS supervisors, however, led the evaluation team to suggest some improvements.

Recommendations:

CRS supervisors should conduct complete monitoring activities when they visit a center, including reconciling the tally cards and physical inventories, checking the Growth Surveillance System charts and the monthly reports, and assisting the managers and other center personnel with their problems.

Because of the difficulties and costs of transportation, CRS supervisors should monitor every center in a location when a visit is made; this procedure would also reduce the apprehension and uncertainty felt by some center managers when they are not visited.

Finally, USAID/Ghana, through its Food for Peace office, is mandated by law to monitor the entire Food for Peace Title II program in that country. Some confusion about that mandate was evidenced; transportation difficulties inhibited the amount of monitoring that could be carried out. Nevertheless, the number of USAID mission visits to centers and the amount of supervisory functions with the central management of the commodities were insufficient.

Recommendations:

A formal schedule of visits to the distribution centers, monitoring of the port and warehouse activities, and the review of the documentation in the CRS/Acra offices should be drawn up and conducted.

USAID/Ghana and AID/Washington should enter into negotiations so that a full time vehicle is available to the Food for Peace office so that the monitoring activities can be carried out efficiently and on a timely basis.

Sufficient and efficient monitoring of the Food for Peace Title II program by the USAID/Ghana officials can result in more complete information needed for making decisions about the program, thus enabling the mission to complete its obligatory functions more effectively. Finally, that information will then prevent the endorsement of documents that contain inaccuracies.

CHAPTER V: DISTRIBUTION CENTER OPERATIONS

A major strength of the Catholic Relief Services Food for Peace system was the distribution center personnel. The evaluation team was impressed with their dedication to the tasks, their concern for the children, the enormous amount of work most of them carried out daily, and with their sincere attempts to complete the records accurately and on time. Some deficiencies will necessarily be noted in this review of the work of the distribution centers but those should not detract, however, from the generally high quality of this part of the system.

The Catholic Relief Services program was predominantly MCH-Child, as previously noted. That category made up 69% of all the recipients authorized by CRS on its distribution lists. While some variation existed between the authorizations and the actual number served in the evaluation samples, as shown in Table 14 in the previous chapter, the number of MCH-Child participants would not be less than those officially declared by the Accra records. The Other Child Feeding, mostly day care centers, approximated the AER request. (Table 16) Similarly, Food for Work recipients and their dependents were said to approach the requested number. The School Feeding program numbers in the distribution lists were somewhat lower than the request.

Table 16 : AER Requests, CRS Authorized Recipients, and Percentage of Total Ghana Program by Recipient Category for FY 81

| Recipient Category | AER Request | CRS Authorized | % of Total Program |
|---------------------|-------------|----------------|--------------------|
| MCH-Mother | 31,000 | 0 | 0 |
| MCH-Child | 145,000 | 180,000 | 69.0 |
| Other Child Feeding | 11,000 | 11,659 | 4.6 |
| School Feeding | 68,000 | 64,150 | 24.5 |
| Food for Work | 5,000 | 5,000 | 1.9 |

The CRS authorized recipients were served in 412 centers across the nation. Many of these with a single management operation, however, also assisted other sites through services to subclinics, out stations, nearby day care center, and a few included more than one school. Mobile clinics, although not large in total number, often served many villages as a part of their operation. Combinations of programs were especially important in areas where

storage could not be provided in every site. (Table 17) Although these were of considerable extra work for the managers, they gave a greater degree of control over the quality of the commodities. Too, more sites could be served since the smaller vehicles of the centers could usually traverse unpaved roads that trucks would not attempt.

MCH programs in clinics, health posts, hospitals, and malnutrition wards accounted for more than half the programs. (Table 17) The school feeding programs were the next largest category with 27.3% of the centers on the CRS distribution lists. Combination programs made up 12.6% of the listed center operations.

Table 17: Title II Distribution Sites in Ghana by Program Type and Percentage of Total

| Program Type | (Subtotals) | Number of Sites | Percent of Total |
|---------------------------------|-------------|-----------------|------------------|
| <u>MCH Programs</u> | | 217 | 52.7 |
| . Clinics/health posts | (186=45.2%) | | |
| . Hospitals, malnutrition wards | (31=7.5%) | | |
| <u>School Feeding</u> | | 112 | 27.2 |
| <u>Day Care Centers</u> | | 8 | 1.9 |
| <u>Combination Programs</u> | | 52 | 12.6 |
| . Clinic and OCF | (29=7.0%) | | |
| . Hospital and OCF | (5=0.7%) | | |
| . School and OCF | (10=2.4%) | | |
| . School and Clinic | (9=2.2%) | | |
| . Clinic, School, and OCF | (1=0.2%) | | |
| <u>Food for Work</u> | | 12 | 2.9 |
| <u>Unidentified*</u> | | 11 | 2.7 |
| TOTAL | | 412 | 100.0 |

*These were not visited by the team and their titles did not indicate the program type.

The operational methods varied widely among the several program types, depending upon the tasks required in the performance of their duties. Each will be discussed separately, then, to provide a complete description of the operations and the information on how each was conducted.

MCH CLINIC PATTERNS

Although there were minor variations, the usual pattern of processing the MCH recipients was as follows:

1. Each mother reported to an administrative office and received authorization to attend that day's clinic.
2. An examination of the child was done either by a nurse or a doctor, depending on the health of the child; referrals were made at that time, when needed.
3. Vaccinations, if due, were given the children either at this point or during the time the children were being weighed.
4. When most of the mothers had gathered together, a lecture was given on nutrition, food preparation, family planning, hygiene, and/or general health measures.
5. The children were weighed individually, the weight entered on the individual child's card and either on a permanent clinic record or on the GSS master chart directly; in some clinics the master chart was prepared from the clinic records.
6. Authorization was given for the distribution of the rations, and the mother proceeded to that station and received the commodities; in most cases, that completed the process and the mothers went home with their children.

Despite the large numbers attending the clinics, the process was orderly and carried out as efficiently as could be expected with the small amount of help available and the many that had to be served. The presence of the evaluators sometimes caused some interruption of the process but even that was dealt with in an effective manner. Only occasionally was there some confusion, usually because a mother arrived late and wanted to be incorporated into the ongoing part of the process.

Most of the clinics began between 7 and 7:30 am and were concluded between 1 and 3 pm. The staff was busy after closing with record keeping, taking care of special cases, returning unused rations to storage, and cleaning up the clinic. Clinics wound up their daily activities sometime between 4 and 7 pm, depending on the staff available to help and the number of participants. In the case of out stations or mobile clinics, staff had one to three hours travel to home base.

Each clinic had an authorization system. In some, the mothers

kept a special card on which notations of each visit and commodity issuance were listed; in others, the card remained at the clinic and, after notation of the visit, a chit or ticket was given to the mother. During the inspection by the evaluation team only a few mothers were turned away. Some had forgotten their authorizations or did not have their children with them or were signed up to receive service in another clinic; three mothers had children past the eligible age for rations. Mothers with newly eligible children and those that had not attended before were processed, or registered, prior to receiving authorization to attend the clinic that day. One child had passed the eligible age which fact was not discovered until the rations were being issued; despite strong protests by the mother, the child did not receive a ration.

The extent of the health examination of the children varied a great deal. Those that were well and weighed the normal or near normal amount were looked at cursorily and questions about their health were posed to the mother. If the child were considerably underweight or was ill, the examination was much more detailed, often including temperature, eyes-ears-nose-throat, and bodily observations. If any disease symptoms were found, the child was referred to the clinic doctor, if there was one, or to a nearby clinic or hospital that had a doctor. Children with infectious diseases were isolated from the rest of the group and were weighed separately.

Serious cases of malnutrition were always referred to a doctor if that had not been done previously. Those children were often admitted as bed patients, if warranted, or at least ordered to appear at a clinic or hospital every week until substantial improvement was registered. Often, the mother and even other members of the family were examined to determine if others required special treatment.

An integral part of the plan for food distribution is that nutrition education will be given so that mothers will feed their families better, incorporate the appropriate local protein and caloric foods into the diets and, in the long run, reduce their dependence on the donated commodities. In Ghana, the volunteer agencies had earlier provided much of this service directly. Later, when government and religious institutions took over the distribution of the foods, the centers were made responsible for furnishing nutrition education. Catholic Relief Services continues to assist center personnel through seminars and encouragement. (See Appendix E for a sample seminar agenda.)

The Government of Ghana, through the Ministry of Health, the universities, and nursing schools, has assumed the major responsibility for training personnel in nutrition and in methods of disseminating this information. Substantial training in both these areas is given to registered, enrolled, community health, and

public health nurses. In addition, technical officers are trained to assist with nutrition services. Religious and lay agencies not associated with government training programs have also apparently had extensive education on nutrition.

Nearly one-fourth of the distribution centers was observed on a commodity distribution day. Since most centers did not know in advance of the team's visit, the sessions could not have been "invented" for its benefit. In every instance a substantial nutrition program was conducted with the mothers. Most of the lectures included a demonstration of food preparation using the commodities being distributed; utensils and accessory foods already in place indicated that the demonstrations had been planned in advance.

The education part of the program, conducted by various professionals - nutrition technical officers, nurses, doctors - was given in the language of the local population, not in English (some of the team members had to arrange for translations); in two cases, two local languages were employed. In half the programs one or more mothers were used during the food demonstration to explain why certain food should be used and to translate from one language to another. Almost all the mothers listened attentively, and many asked questions during the session. The translators and team members who understood the languages in the sessions noted that the talks were given in "plain words" not in scientific jargon.

Although no impact evidence could be gathered, the nutrition training sessions were well conducted. The present arrangement for imparting information through the distribution center personnel with assistance from the nutrition technical officers appeared to serve admirably. Further, by utilizing Ghanaian personnel, the knowledge and teaching skills remain in the country as a permanent contribution to better nutrition; the teaching of mothers further extended this potentially residual benefit from the food distribution.

However, the team noted some serious obstacles to the improvement of nutrition, especially for children. These derive primarily from the food habits of the population, whose meals concentrate on starchy foods. Obviously, longstanding food habits are difficult to change. But the situation is so grave in many areas that efforts toward the incorporation of high protein foods need to be made. One observed project, initiated by Catholic Relief Services, was the raising and eating of rabbits. Mothers living on a clinic compound were taught how to raise, butcher, and cook them. Since in all southern Ghana, grass and weeds grow plentifully, protein could be added to the diet through the rabbits at little cost to the participants. The introduction of new vegetables should also be attempted, especially the green leafy types and others with more protein. In the north, produc-

tion of mangle (related to beets) has been recommended for its leaves and roots. Clinic gardens, community plots, and demonstration areas could be set up. The Ministry of Agriculture should be available to assist with such projects.

The most serious malnutrition problems were shown to be during the period after weaning. However, except for some inhabitants of the northern part of the country and a few northerners in the southern section, milk from cows and goats is unavailable. Even more serious is the deep prejudice of most Ghanaians against milking goats and drinking the milk. (Some professionals even shuddered when the topic was discussed.) Goats were everywhere and, although most were the smaller breeds not well developed for milk production, the larger milk types were observed. Despite the enormous difficulties, some projects to introduce milk goats and educate the populace in the use of goat milk, cheese, and butter, especially for recently weaned children, should be begun. The malnutrition problem is too severe and the opportunities so readily at hand that this possible resource should not be ignored.

All responsibility for the commodities rests with the center manager after a truck arrives at the distribution center. The manager or a designate supervises the unloading of the foods, verifies the received and waybill counts, signs the waybill for the trucker, and receives a copy for transmission to CRS/Accra. The centers reported few problems with this procedure during the past year. One center was expected to receive "sweepings" in lieu of two bags. Some reported that sometimes delivery would be made when the clinic was closed, causing problems for the trucker and the center (in two cases the commodities were unloaded at another place). Truckers have to unload as soon as possible, so probably little could be done about arrivals. Some cartons of oil arrived with a tin missing, with crushed tins, and/or with tins only partially full. Verification of these problems in the CRS warehouse, of course, would entail opening the sealed cartons and increasing the danger of theft. The centers, too, find it difficult to inspect the oil cartons, especially when the shipment is large, during the unloading operation. They simply have to inspect later and report the shortages to CRS/Accra. No immediate solution to the difficulty was apparent; the previously discussed possibility of receiving the oil cartons in large shipping containers from the ship could at least reduce the crushing as well as the chance of losses during the unloading at the port.

Half the centers reported that from a few to perhaps ten bags of the grain products had become wet during the trucking. Many others noted that delivery during a rain storm often resulted in some damp or even wet bags. Occasionally these were unfit for human consumption. They noted that they always isolated those bags and distributed them as soon as possible. Rebagging was also practiced in some centers. One had some SEFG spread out to dry in the storage shed at the time of the inspection. It appeared

that the center managers make every effort to recover all of the commodities possible. Loss reports were filed with CRS/Accra when bags were partly empty or when the dampness had spoiled the food. One center had disposed of the spoiled commodity in a manner not commensurate with the CRS instructions; a field supervisor for CRS was following up the case. Most managers knew what to do when this happened.

MALNUTRITION CLINICS AND HOSPITAL WARDS

Most of these facilities served a large geographical area and received many of their patients through referrals. The children were confined to their beds during the early stages of the treatment and to the nearby hospital grounds after their condition was alleviated. The mother was almost always required to stay within the hospital or clinic compound.* When needed, other small children could stay there also. The hospitals and clinics were woefully understaffed; thus the mother was expected to help care for the child. Additionally, the education of the mother during the child's hospitalization was seen as a very important part of the process.

Education for the mothers encompassed many areas of health and health related care: bathing the child, feeding, food preparation, nutrition, hygiene, laundry, household sanitation, procedures for improving the health conditions of the family such as boiling the drinking water, family planning, recognizing disease symptoms, and general health precautions. The participation of the mother, together with others, was considered an exceptional opportunity to instill better family care.

One of the most important factors in the treatment of severely malnourished children in the hospitals and the clinics, according to the doctors, was the provision of milk and formulas in the diet. Most of these facilities received some quantities of dried skim milk, dried whole milk, Lactogen, Babylac, and supplemental multi-vitamin drops. These products, used in conjunction with the Wheat Soy Blend, were considered indispensable in the diets of these ill children if they were to be saved from death. The supplements came to the hospitals and clinics through several sources. Among the most frequent were donations from the European Economic Community which were channeled through Catholic Relief Services. Additionally, and especially in the case of Catholic hospitals and those staffed by religious and lay personnel from The Netherlands, Germany, and Switzerland, some direct contributions were made from those countries. Donations were

** Families are expected to help with most hospitalized patients, not just with the malnourished babies. Additionally, less psychological trauma was reported when family members were present.*

similarly received from the United States, Canada, Italy, and Spain. In addition, vaccines, medicines, and some hospital equipment had also been acquired, including two electrical surgical tables from the USSR arranged for by the Dutch ambassador to Ghana.

Such contributions to the welfare of the children and adults, whether via Catholic Relief Services or private contacts or from private companies such as Nestle, charitable organizations in the countries, governments, parishes, or individuals, were vital to the total health care in the areas that received them. The European Economic Community and all the other agencies and private entities should be recognized for the important part they play in helping save the lives of thousands of children.

Doctors and nurses in these facilities also pointed out that they served many destitute and malnourished patients not included within the eligible age group for commodities furnished through Food for Peace and Catholic Relief Services. They reported that many mothers do not lactate sufficiently to breast feed their babies properly and that large numbers of children over the age of five were seriously ill because of malnutrition. Whole wards of such non-eligible families with tuberculosis, malaria, pneumonia, intestinal disorders, and other diseases, exacerbated because of malnutrition, must be treated somehow without the use of Food for Peace commodities. Few food resources were available to these patients. Some knowledgeable hospital staff noted that while provisions of PL 480 allow rations for such persons, in Ghana they were not allowed to distribute or feed to non-eligible patients. Indeed, some facilities did not receive enough commodities for the malnourished children, much less for other malnourished in the wards.

The use of dried milk and formulas in liquid form has created a great deal of controversy, primarily centering on the incidence of diarrhea. Lactose intolerance, improper dilution, and/or the use of contaminated water are suggested as possible causes. In the sample institutions in Ghana the milk and formulas were prepared in hospital kitchens under the strict supervision of nurses; they all insisted that not a single case of diarrhea had resulted from their use. When mothers are issued the product, they are taught to incorporate them into cooked preparations for the children: porridge. Only one case of intestinal upset was reported from this method, and the nurse suspected that the mother had not followed the instructions given her. In any event, the doctors and nurses were convinced that these products were necessary for the babies and newly weaned children and, if prepared properly, caused no digestive problems in Ghana.

DAY CARE CENTERS

The sample day care centers were not just child care but were more

like preschool programs in the United States. ("Preschool" is a term used by CRS/Ghana for the MCH-Child recipients.) In addition to caring for the children, the centers provided some education, especially by teaching English to (mostly) non-English speakers. With a trained teacher in charge, several assistants assisted with the many activities.

Several religious organizations and some local government agencies ran the centers. Most of the children were four and five year olds, though a few three year olds were enrolled in some of the programs. Fees were charged in all but two of the sample day care centers, ranging from ₵40 to ₵70; in many centers the children were from homes of professionals and business people. It was not possible to ascertain exact counts of the children that were also enrolled in an MCH-Child program. Some center managers reported "most" while in others the teachers said "only a few." All centers stated that there was no regulation against children being in both distribution programs.

In all but one of the centers, the assigned commodities were cooked on or near the premises, usually with the addition of local products, and served as meals. Half the centers had enough commodities to serve a porridge early in the morning and a lunch at noon; the others served only one meal a day. One served only "rice water" in the morning; another served a morning porridge and the children took some dry commodity home when they left at noon.

Kitchen inspections showed wide variation. Most were charcoal fires on a raised hearth; two were simple cooking fires inside three stones on the ground; and the others had some type of stove arrangements. Most of the "kitchens" were reasonably clean, though three were quite dirty. A few of the kitchens were exceptionally clean and well organized. In at least one, the team nutritionist judged the length of cooking time to be inadequate considering that water from a creek was used; cooking time in another was questioned since the sorghum grits were still very hard. Food was served in various utensils, from simple gourd bowls to glass dishes. Spoons were available in all but one center where the children ate the food with their hands and drank from the bowls. However, it must be emphasized that in the majority of kitchens, the cooking and feeding arrangements were adequate considering the conditions extant in the day care centers.

During the past twelve months the quantities of Food for Peace commodities supplied to the day care centers varied a great deal from very meager amounts to enough for regular feedings. A few centers had received supplies from other sources - rice from the Government of Ghana and the People's Republic of China, some local foods such as plantains and yams from the district councils - but these amounts were always small and sporadic in delivery.

Commodities in most of the centers were furnished from the Other

Child Feeding (OCF) category of CRS/Ghana authorizations. Four instances were found, however, of an MCH clinic distribution center supplying a day care center, reportedly on authorization from CRS, even though they had no special allotment for OCF nor did the day care center appear on the distribution list. In one of the four, the inspection of the premises had not yet been carried out, although a public health nurse had been asked to investigate and report to CRS.

Almost all the day care centers were feeding fewer children than the number of authorized recipients. A part of the discrepancy resulted from absenteeism caused by illness, other activities of the family, lack of transportation and, in two centers, because there was no food. All managers reported that fewer children attended when there was no meal. In one center, although the number of children (about 100) had not increased during the last two years, the number of authorized rations had risen from 120 to 180; however, since the center had no food from January through late April 1981, the number of authorized rations did not mean much during that time. The centers in the Upper Region, a double ration area, did not have enough commodities to issue even single rations, a condition shared by all the Upper Region distribution centers.

In most of the day care centers the children were not weighed. CRS noted that they were attempting to obtain scales for them and would encourage keeping GSS data when scales were available. In the absence of such data, the evaluation team could make only general judgments about the condition of the children. In every center a few children appeared to be underweight when visually compared to the group as a whole; in the Upper Region, the proportion of underweight children was greater than elsewhere.

Despite the relatively low number of malnourished children in many of the centers, there were some reported advantages to the day care feeding program that should be recognized. As noted earlier, the teachers stated that more children attended when meals were served. Since the major educational emphasis in most of the centers is the teaching of English, the language of later formal schooling, increased attendance could further their learning of that language and, in turn, enhance future educational opportunities. In addition, with the high cost of food in stores and markets, some families have difficulty sending lunch with their children to school. Even well children cannot be expected to function properly over extended periods of time without some food. Teachers felt certain that all children learned more when they were not hungry. If sufficient commodities can be made available to feed the malnourished, meals provided through day care centers could add to these children's wellbeing and educational achievement.

SCHOOL FEEDING PROGRAMS

Eleven school feeding programs were included in the study sample and all but one could be studied in detail as they operated every week day and their hours were longer than many of the clinics. Students from kindergarten through sixth grade are eligible. Ten of the eleven school feeding programs monitored had formal authorizations and allocations.

Both CRS and USAID/FFP verbally indicated a reduced emphasis on school feeding, although the CRS FY 82 program plan stated, "In regard to school lunch and OCF, a more rapid expansion (in relation to a proposed 10-15% MCH increase per year) is requested..." The ten schools with agreements and authorized rations had had no formal announcement of reductions and, indeed, were still receiving advance notices whose commodity amounts appeared to be in keeping with the agreements. However, not one of the ten had received enough commodities to issue the authorized rations; all of them had had periods of from one to six months without Food for Peace deliveries. As might be expected, staff members of those centers were upset and even angry, particularly when some other type of distribution center in the same vicinity had received sizable amounts of food during the same period. Some short term borrowing had been arranged with other centers, but there was apprehension about the schools' ability to repay the "loans."

No child within the age group of the school feeding program was eligible for an MCH-Child ration, and none was reported. Most of the managers were of the opinion that some children within the schools were from families in which an eligible child was receiving rations. When such rations were used for the entire family, the school child benefitted to a limited extent.

The Government of Ghana had earlier announced that it, too, would reduce its assistance to school feeding programs, although both CRS and USAID officials stated that they expected the government to take increased responsibility for school feeding. The assistance the Government of Ghana had given to school feeding had mostly been to boarding schools, with more going to secondary than to elementary and middle schools. Two had received small quantities of rice (some purchased by the government from the United States' Title I) and from China (a small quantity was donated by China), wheat (apparently purchased by the government from Title I supplies), and some Canadian wheat flour (apparently purchased). From the fees collected from the families, local foods were bought and either added to the other commodities or used when those were not available. Such foods were very limited, however, since fees charged were uniformly low and very poor families paid nothing.

The feeding programs for regular schools provided a daily meal, usually in late morning or at noon, and the meal consisted of a combined vegetable and root dish. Some schools added the commodities to a combination dish; others fed the local foods three days and used commodities for meals on the other two days. Four

schools were able to provide meals only twice a week and three others three times weekly. Boarding schools for the handicapped (mostly deaf and blind) served two meals a day. In every case the individual portions were small.

As with day care centers, the school cooking facilities ranged from fires on the floor to stoves. Similarly, the sanitary conditions varied from filthy to very clean. The cooking times appeared to be adequate. In most schools the children had brought some kind of container from which to eat; most ate with a spoon but some used their hands.

Although the Government of Ghana spent a large portion of its budget for education, conditions in the sample schools were evidence of not enough money. Although the buildings were all well constructed, maintenance had been neglected. Most needed paint, many needed extensive repair, and a few were in very poor condition generally. Desks, tables, and benches were fewer than the number of students, some of whom had only benches. All of the furniture needed repair. There were few books, little paper, and nearly no other supplies. In three schools, the children sat on the floor and wrote with chalk on the benches. Many teachers volunteered that their salaries were too low to allow them to feed their families. District councils had provided some help to three of the elementary schools but the amounts were severely limited. Religious organizations furnished some assistance but, since all schools are now the responsibility of the Ministry of Education, found it difficult to justify putting much money into the facilities.

The managers and teachers reported the same advantages to school feeding as were cited by day care personnel: more children attended school when there were meals, illness was lower, and the attention to the lessons was greater, thus facilitating learning. Teachers often noted that many of the children came to school without breakfast and that they would receive no noon meal even if they went home; one night meal was the common daily fare for most poor families. It is difficult, if not impossible, for children to study and learn well when they are hungry.

The schools also did not weigh the children, although a few were told to expect scales and a growth surveillance process. The evaluation team was hard pressed to judge the amount of malnourishment among the elementary children. In every school visual comparison showed some children to be seriously underweight for their age. In some of the schools, especially in the Upper Region, the proportion was quite high. The team felt that in every school there were children that definitely needed supplementary feeding. Food for Peace help to these children appeared warranted.

FOOD FOR WORK

In the past there had been a rather large Food for Work (FFW)

program in Ghana which had been sharply curtailed in the past two years. CRS noted in the FY 82 program plan that it did not have the staff or the finances necessary to organize a large FFW program:

We include 5,000 Food For Work recipients (workers and dependents) at the USAID Ghana Mission's urging in order to allow us to respond to a possible initiative by the Government of Ghana in this area. CRS does not presently have the intention of undertaking an FFW program in FY 81 for the reasons stated in last year's AER submission: our accountability for the distribution of Title II commodities to the intended recipients and for the intended purpose would require extensive supervision of an FFW program and would necessarily direct the efforts of our staff, the use of our vehicles, and the already tenuous transporting of commodities away from the CRS priority of MCH activities. Moreover, the shortage of almost every sort of building material and implement in the country makes it difficult to identify types of projects that could be expected to be accomplished by unskilled laborers in an FFW program. Therefore, the initiative for proposing, planning, and implementing an FFW in FY 81 must come from outside CRS, and CRS would expect to receive funds to defray the substantial costs of administering an FFW program.

The decision to re-institute Food For Work programs was said to be due largely to the food scarcity in Ghana and the pressure from various local organizations interested in the food for development idea. Therefore, CRS, at the urging of the Mission, decided to experiment with Food For Work projects in FY 81.

Food For Work application forms were prepared requesting identifying information and a description of projects and their implementation. These were distributed to various organizations in early 1981. The records showed that many applications had been received.

Twelve applications were considered acceptable and were approved. They included:

- . Four projects to increase the number of acres cultivated;
- . One project to build a day care center, one health post, and to cultivate 4 acres of vegetable crops;
- . Three projects to build water tanks and wells;
- . Two projects to raise rabbits; and
- . Two projects to construct or renovate school classrooms.

For each of these projects, a contract was drafted that described the specific objectives, time period, resource requirements, budget, project management, implementation responsibilities, work plans, and beneficiaries. Unfortunately, there was no definite indication in these contracts as to the number of days or rations approved by CRS. The only concrete information given concerning the CRS aid was related to money to buy tools and/or equipment. Evidently during the discussions preceding those contracts, food was considered available as an incentive.

One of the studied projects was located about 100 miles from Accra. The project was started initially by an organization of the Government of Ghana to slow the migration of young Ghanaians from the countryside to the city. The local representative of the Ghana National Reconstruction Corporation (GNRC) and the local authorities, including the traditional chief, agreed that young farmers did not have enough land individually to allow them to cultivate enough food or crops to become self sufficient. The local representative of the GNRC indicated that his government organization would supply some tools to clear and cultivate land for 50 of those young farmers if the traditional chief allowed them to cultivate some of the land near the village. The chief granted 100 acres to the GNRC, who in turn designated the 50 young farmers to cultivate it. Unfortunately, the GNRC could not quite meet its obligations and a tentative agreement was reached in December 1980 with CRS that if the farmers would work, they would receive 1 bag of SFSG and 1 tin of oil for every two dependents, which amount is less than the AER specifies, for each month of work.

During the visit to the site, twelve young men and women were found working on the project; the local members responsible for the project said the others were employed on the periphery of the 100 acres to cut bamboo for some construction they intended to do. The project was to cultivate white corn and yams. Asked how long the projects would last and when the young farmers would become self sufficient, the CRS representative indicated that the project was at an experimental stage and that the idea was that when the entire 100 acres were under cultivation, at that time the production would be enough to satisfy the needs of the local farmers. It was estimated that this year they would harvest 3,000 pounds of white corn, which would be distributed equally among them. Sixty pounds per participant were to be sold and the proceeds put into a special account from which member farmers could draw to defray expenses incurred on their farms and for expenses shared among them. The farms were under management committees appointed by and from the settlers themselves and headed by a chairman.

A second project was managed by a Peace Corps volunteer with rural extension experience. That project pooled labor in cooperatives, including individual member farms. The workers did not share farms, pay dues, share harvests, nor were they paid salaries, but received allotments of Food for Peace commodities. They worked

in groups to do all the labor necessary, farm by farm, during a five day week. This method was reported to have increased the acreage cultivated. The project started in January 1981, but the first shipment of Food For Peace commodities did not arrive until May. The storage of the commodities as well as the bookkeeping was handled by the Peace Corps volunteer. The contrast between the prosperous look of that village, compared to those nearby, was striking.

The manager believed that this form of cooperation was successful and would be even more successful with the incentive provided by the food to produce more community development projects, such as improving the roads and the water. Asked if the food did not rather act as a disincentive, he said that the production had just achieved the subsistence level and that some surplus was needed for improvements.

It was too soon to make substantive judgments about the CRS Food for Work program in Ghana. However, the need for such a program was expressed by many of the missionaries and other responsible authorities in all areas of the country. The cost of food had increased to such an extent that even with all the problems created by storage, transport, and distribution, the FFP commodities had become more valuable than ordinary money wages. For some areas of the country, barter had nearly replaced local currency. CRS stated that it did not have, at that moment, the staff necessary to start an FFW program even on a medium scale. They indicated a need for staff that could not only help plan self help projects, but also check and supervise the technical and logistical activities. A supply of food as worker salary would be required. In addition, financing for tools and materials necessary to implement community or agricultural development projects must be furnished through some agency. CRS had a small amount of local currency from the sale of containers and participant fees and used some of it for the FFW projects. It was not enough in a country like Ghana where any imported equipment, tools, or materials are extremely expensive. Assistance from other agencies will no doubt be needed if a large scale Food for Work program is to get underway in the future.

STORAGE FACILITIES

Forty-eight storage facilities were inspected during the study. Almost all of them were strongly constructed with adequate doors and locks; two needed some improvement in this regard. All had concrete floors and most had concrete at least up several feet on the walls. Ventilation was provided from windows with bars or heavy screens; only one was poorly ventilated. Protection from rodents and insects was somewhat less secure but appeared generally adequate. Little rodent damage was observed.

In all but four storage rooms, the commodities were stacked on pallets, thus allowing circulation of air below them and reducing

the incidence of spoilage from moisture. Most did not have the commodities stacked against the wall, thus providing further circulation of air; a few were so full that commodities were touching the walls. Most, too, were clean; eight had open and unprotected sacks; four needed a thorough sweeping. As a generality, however, the storage rooms were clean.

ACCOUNTABILITY

Each center manager is charged with the responsibility of issuing the commodities, entering the amount issued on the tally card, and then reconciling the physical inventory with the amount on the tally card at the end of each month for the monthly report to CRS/Accra. During each monitoring, a team member physically counted the commodities in the storage (when possible) and examined the tally card for the recorded amount for each commodity. These numbers were entered on the regular USAID/FFP inspection sheet and on the tally card, along with the date and signature of the inspector.

Approximately half of the centers' tally cards and their inventories agreed. Combining the column "None on hand" (these were verified) and "Inventory and tally agreed" in Table 18 shows that 42.6% of the centers was correct on SFSG, 63.8% on soy oil, and 57.5% on WSB.

Additionally, the last column, "No count" (the commodities were piled so that they could not be counted without physically

Table 18: Status of Tally Card and Physical Inventory Checks in the Sample Centers by Commodity: Percentage of Centers*

| | None on hand | Inventory and tally agreed | Inventory more than tally | Inventory less than tally | No count or no records** |
|---------|--------------|----------------------------|---------------------------|---------------------------|--------------------------|
| SFSG | 19.1 | 25.5 | 17.1 | 19.1 | 19.1 |
| Soy Oil | 34.0 | 29.8 | 6.4 | 10.6 | 19.1 |
| WSB | 27.7 | 29.8 | 6.4 | 21.2 | 14.9 |

* One center was a subcenter and did not store its own commodities.

** Commodities were piled and could not be counted on the tally cards were not available for comparison.

removing all of them, or the key was not available so that they could be counted) or "no records" (the tally cards were not available) could also include correct tallies which could not be verified.

The SFSG inventory was greater than the amount on the tally card in 17.1% of the centers; oil and WSB were greater in 6.4%. The differences were small, accounted for by mathematical errors and by neglecting to enter returns on the tally card, in all but three of the centers. In those three centers the differences ranged from ten to more than fifty bags. Each of these supplied several out stations or mobile clinics. Because of road and vehicle problems, transportation to these was often unsure, and foods would sometimes be issued and then returned when the trip could not be made. Since amounts returned were seldom re-entered on the tally sheet, this no doubt accounted for the large differences.

One center had 79 more cartons of oil than was recorded on the tally card. An examination of the card showed that although the last shipment had been entered on the tally card, that amount had not been added to the amount on hand at the time, thus accounting for the disparity between the two numbers. All other oil differences amounted to a few gallons, less than a carton.

Only one serious case of excess WSB inventory was encountered. It, too, was a mobile clinic that had suffered transportation failure and the returned commodity had not been entered on the tally card. The other variances were minor and of no great consequence.

Most of the cases of a smaller WSB inventory than the entry on the tally card were with small differences between the two. They most frequently involved day care centers and school feeding programs where small amounts are withdrawn almost daily. Too, sometimes partial bags received were entered as full bags. It would be relatively easy to forget a withdrawal or two during an extended period of time. Two cases were too large to ignore, and no adequate explanation was offered by the center manager: one involving 73 bags of WSB and one of 100 bags. Those cases merit investigation. Only one center had bulgur wheat on hand, and that could not be counted because it was piled so haphazardly that only strenuous effort could have verified the large amount on the tally card.

It is important to note that except for the two cases already mentioned, the evaluation team was convinced of the honesty of the center managers. The managers were always surprised that the inventories and the tally card amounts did not agree. Generally, they could recall the event or events that led to the variances. No effort was made to "cover up" the imbalance. Overworked personnel simply made mistakes or forgot to make some needed entries.

A short instruction sheet would help many of the managers, parti-

ularly those that have recently taken over distribution. Topics such as the following would be helpful:

- . what to do when the unloaded amount does not agree with the waybill;
- . how to add existing inventory and newly received commodity amounts together for a new tally balance;
- . how to subtract accurately when commodities are removed;
- . how to re-enter commodities returned to storage by entering that fact on the tally card and adding the amount to inventory balance;
- . how to take a physical inventory and reconcile the tally card and the inventory each month for the monthly report;
- . procedures to follow when theft or spoilage occurs.

Though these procedures seem simple to managers experienced in commodity distribution, a short page or two of such instructions that could be tacked on the storage wall could have avoided most of the discrepancies found in the inspections. It should not be inferred, however, that CRS has not issued instructions. In earlier years a manual did exist, and some centers still have copies. Seminars have also been held to deal with these topics, and circular letters from CRS have outlined proper procedures. But a handy instruction sheet located right at the storage area could facilitate carrying them out correctly.

MONTHLY REPORTS

Monthly reports for April 1981 had been submitted by all but two of the centers visited by the team. Monitoring in early June determined that the May requirements had been met by most of the centers. However, one center was five months late and another three months late in submitting their reports. Waybills on recently received commodities had been properly forwarded to Accra.

Most centers had copies of their monthly reports available. The monthly report figures on the inventories were compared with the tally cards and the physical inspections. In most cases, the numbers on the monthly reports agreed with the tally cards rather than the real inventories. Where there were large discrepancies, either more or less than the reported figures, the monthly reports would necessarily mislead CRS in its allocation of the foods. A controversy about USAID inspections, which reported much the same occurrences, probably had its roots in discrepancies between monthly reports of supplies on hand, the only record CRS/Accra had in its offices, and the physical inventories counted during the inspections.

The centers, except for two, had also sent in with the monthly reports their master charts of the Growth Surveillance System. Discussion of these charts will be covered in two later chapters. As a part of the monthly record keeping, however, a few deviations from proper CRS procedures need to be noted. The instructions indicate that each child's weight is to be recorded on the master chart and then on the individual child record. About half the centers followed that procedure. Since there were no instructions to the contrary, the inspection team expected that a master chart or charts would be prepared for each clinic and/or out station. Several with very large numbers of participants selected a clinic day or an out station to be reported for the month, varying these among the months. This would give CRS at the very least an incomplete picture of the weight situation for any one monthly examination, especially when the amount of malnutrition varied considerably from clinic to clinic and village to village. It was also noted that the number of "dots" on the master chart often did not correspond with the number of participants, as was previously discussed. No apparent bias was discernible in the omissions, however, so they probably had little effect on any general study made of the charts.

In summary, the monthly reports and other submissions from the centers appeared generally to be dispatched on time. The discrepancies between reported commodities on hand and inventories were probably the most serious problem for both CRS and the center management systems. Even then, only those centers with substantial errors, a small proportion, would cause difficulties. As general indications of the status of the children being served (with the reservations stated in the chapter on Growth Monitoring), monthly submission of master charts should be sufficient. Care should be taken, however, in imputing absolute nutritional status from these charts, because of the problems.

CENTER ACCOMMODATIONS TO SUPPLY AMOUNTS

Every center had experienced at least some period during the last twelve months in which it did not receive supplies. Center managers described two methods of dealing with this problem. About 20% said they simply fed until the food was gone and then stopped until more arrived. All the others stated that when they foresaw a shortage, they reduced the quantity being distributed to stretch the rations over as long a time as possible.

Both systems, plus one other, were in evidence during the inspection. A few were not delivering commodities to some out stations, others had stopped issuing rations to anyone, while the majority was giving out less than the ration stipulated in the agreement. Rations as low as one pound of SFSG and/or WSB were observed; varying amounts, 1 kilo to 1½ kilos were also noted. Three centers were issuing more than the 2 kilos of grain products per month since they had more than adequate supplies on hand and other advance notices had arrived.

The rations specified in the authorization letters also varied. While most said "2 kilos of SFSG and WSB, 1 liter of oil" per child, a few said 3 pounds (2 kilos = 4.4 pounds). Instructions to school feeding and other group child feeding programs were usually phrased as the number of students to be fed per sack of grain product per month or week. In one of these cases, possibly due to a typographical error, the ration per child would have been .72 pounds per month. Most rations would calculate to about 2 pounds per month per child.

The FY 82 program plan stated, "Approval for (double rations) was granted in June 1979, initially for the Upper and Northern Regions and later (FY81) extended to the Ashanti Region as well." However, as already noted, no Upper Region center had received enough commodities for even single rations, much less double rations; since that region was in dire straits, alleviation of this distribution problem is urgent. Only three centers in the Ashanti Region had begun issuing double rations, but the others had received notices that they could begin. CRS also noted storage and transportation difficulties with double rations, but "by 1981, however, the transportation facility had improved significantly, so that CRS is now experimenting with making double deliveries to as many centers as possible." That experiment was not in operation in the Upper Region at the time of the evaluation.

Every center manager in the Upper Region stated that double rations were justified for the region as a whole but that not all individuals merited that much assistance. Many, in fact, were opposed to double rations, noting that a very low proportion of the children were below the 80th percentile on the GSS chart. In the Ashanti Region no health officials and only one center manager agreed with double rations for the entire region, but specified, however, that every center had some children who should have double rations, some mothers who needed rations, and other family members who were severely malnourished. Further, in both regions the managers and other health officials agreed that, although difficult, the best approach would be to give the appropriate center health care officer the flexibility to determine which persons should receive single or double rations or none.

The evaluation team did no study of the Northern Region and, therefore, had no direct information on its supplies. No judgments were made about that region.

SATISFACTION WITH CENTER OPERATIONS

Most of the surveyed participants were in agreement that the centers were well run; only two disagreed. (See Table 19.) Within the context of this positive response, some mothers had suggestions for improvement. Greater supervision during preparation of the foods, when this was a part of the program, was one such

suggestion. One mother complained that not all the food cooked was, in fact, served. Ten felt that the clinic was too far away from their homes, occasioning lengthy trips to receive the commodities. However, since most of the staff members were already overworked, increasing the number of villages served directly was patently impossible.

Staff members, too, were very positive about center operations, though some indicated the "neither agree nor disagree" rating. Only two were in the "disagree" category. (Again, see Table 19.) Staff members, as would be expected, were much more inclined to offer suggestions and complaints about certain aspects of the program. Their comments on the distribution of commodities, not listed in order of frequency, included:

- . Supplies do not arrive regularly.
- . When supplies do not arrive, nutritional impact cannot be maintained.
- . It is difficult to plan the rations to be distributed when some advance notices are unfilled and, e.g., some of them state "complete first quarter allotment" when the first quarter has already passed.
- . Communications with CRS/Accra are difficult and center staff rarely see the field personnel and thus don't know what to expect for future deliveries.
- . How can a truck come to one out-of-the-way place and deliver foods to one center, but not to another one nearby?

Also it was frequently noted that vehicles were needed for distribution to other clinics and out stations, that the vehicles needed repair, and that tires and gasoline were scarce or non-existent.

Comments by the staff about their own operating problems varied considerably:

- . Malnutrition cases are difficult to handle when the mother is also ill.
- . The CRS order to "issue rations to every child that comes" is unacceptable in human terms when some that come don't need the food and a few miles away others that are starving are not being served.
- . When two nurses distribute rations to a thousand children a month in five widely separated clinics, plus all the regular nursing work, they simply cannot keep up.

School feeding programs came in for the harshest criticism. Out-

right charges were made of teachers and other staff members taking the commodities; of lack of supervision of the operations; and of favoritism being shown among the pupils in distributing food. These programs also had the most complaints against the system; most of them had few, if any, supplies on hand, and many had had several periods during the last twelve months without commodities.

Table 19: Frequency of Participant and Staff Ratings of Satisfaction with Center Operations

| Rating | Participants (%) | Staff Members (%) |
|----------------------------|------------------|-------------------|
| Completely agree | 54.1 | 53.7 |
| Agree | 40.5 | 29.9 |
| Neither agree nor disagree | 0 | 13.4 |
| Disagree | 5.4 | 1.5 |
| Completely disagree | 0 | 1.5 |

Without any doubt, the most frequent comment among the staff members was fear that the long years of "hand outs" had engendered or would engender a dependency on the program. Also they often wondered aloud if some more permanent assistance might be preferable for the majority of participants. Suggestions for such help include improving water supplies, sponsoring village gardens, working on roads and other public facilities, and initiating crafts or other projects to provide employment.

IMPLICATIONS OF CENTER OPERATIONS

The 412 distribution centers that issued the Food For Peace Title II commodities to recipients varied according to the several functions required by their sponsoring organizations. MCH programs (clinics, health posts, hospitals, malnutrition wards, and some combinations with other programs) comprised the largest group. These centers had the most regularized operations, which included admission procedures, physical examinations, vaccinations, nutritional and health education, weighing children, as well as distribution of commodities. Many of these centers served large numbers of recipients, distributing to subclinics and out stations, and their staff usually worked very long hours. Their management of services was generally well organized and conducted.

The second largest group was School Feeding centers. These centers

were not expected to weigh the children. Their procedures varied a great deal, their responses to shortages of the commodities being a factor in the varying procedures. Feeding operations also showed wide variation, ranging from very clean and relatively modern facilities to some that definitely needed improvement in sanitation and services. Other Child Feeding programs, mostly day care centers, faced much the same shortages as School Feeding, differed considerably in their sanitation and services, and fed many more children than their allocation. A relatively high proportion of children in those centers was also enrolled in MCH-Child programs in many centers. Though recognizing limitations to the CRS control over School Feeding and Other Child Feeding, the team necessarily was obliged to suggest some improvements.

Recommendations:

As mentioned in an earlier context, the extreme shortages in many School Feeding and Other Child Feeding programs warrant remediation.

Those School Feeding and Other Child Feeding programs with unsanitary conditions and unsatisfactory feeding arrangements should improve them; CRS should find ways to work with those centers to effect improvements.

In the event that the Food for Peace program cannot be expanded in Ghana to reach all malnourished, consideration should be given to the duplications between MCH-Child and Other Child Feeding recipients. It is questionable whether double rations for such children can be justified while other very high risk children receive no supplementary feeding.

Most Food For Work programs were just getting underway and together comprised the smallest program. CRS expressed reluctance to expand that program because of the problems of appropriate supervision, provision of additional materials needed to be effective, and the dangers of increasing the Food For Peace commodities for sale in the markets. Many authorities surveyed in Ghana recommended a greater emphasis on foods for developmental activities. The evaluation team, therefore, suggested that CRS and USAID/Ghana study ways to increase the Food For Work projects.

In general, despite problems with some centers, the evaluation team considered the distribution centers to be a substantial strength in the Food For Peace operations in Ghana. Most procedures were carefully conducted, storage was generally adequate, most reports were submitted regularly, and staff work and concern for the recipients were unusually commendable. The team called particular attention to the high quality of the nutrition education sessions; while no impact of them could be measured, the way the sessions were conducted was exemplary.

CHAPTER VI: MONITORING GROWTH

The Food For Peace Title II Program has as one of its major objectives the improvement of the nutritional status of participants. In a country such as Ghana, where the primary emphasis is placed on preschool children, one of the best tools for evaluating the long term benefits of the feeding program is the use of a growth monitoring system. For preschool children, the growth curve is one of the simplest and best predictors of nutritional status. The strong correlation between a child's pattern of growth and overall nutritional status allows the field workers to identify children with immediate needs for nutritional rehabilitation as well as those who are at high risk of developing nutritional problems. In addition, it also allows staff to document impacts of the program on the children and to demonstrate to mothers the relationship between diet and growth.

Catholic Relief Services, in the interviews in Ghana, in various publications (24 as an example), and in comments on the Upper Volta evaluation report (17), emphasized that nutritional impact is not the only reason for the feeding programs; they stressed the contributions of the commodities to the family and national income. Nevertheless, CRS has expended a great deal of effort to promote the monitoring of weight gains of children through its Growth Surveillance System (20). It has paid particular attention to relative weights in its program plans (21) and reports (18), perhaps partially in response to the USAID mandate for growth surveillance. Finally, since CRS/Ghana used information from the Growth Surveillance System to justify double rations for portions of the nation, some weight gain improvement was apparently expected.

Various types of growth monitoring systems and standards have been used in health centers and clinics throughout the world. The Growth Surveillance System used by CRS in Ghana has also been implemented by CRS staff in other countries. (See the evaluations of the Food For Peace Programs in Upper Volta, 69, and Kenya, 90.) The Ministry of Health in Ghana had already instituted its own growth monitoring system using Road to Health charts based on David Morley's work. (For two studies utilizing Road to Health in Ghana, see 36 and 68.) Although basically similar, the two systems differed somewhat when implemented under field conditions.

The following discussion of the rationale and development of systems and standards for monitoring growth, as well as the results of some comparative studies, provides important background to the findings regarding growth surveillance activities in Ghana. It is important to state at the outset of this discussion that the evaluation team does not disagree, per se, with the Growth Surveillance System employed by Catholic Relief Services. In fact, the team recognizes that the system is much like others in use

throughout the world, that it serves some useful purposes, and that most of the theoretically based, complicated systems could not reasonably be carried out by the workers in the field.

GROWTH MONITORING SYSTEMS AND STANDARDS

Generally, growth is evaluated using one or more of the following measurements: weight, height (or length), and arm circumference or other anthropometric measures. The measures are then combined for plotting on a chart. Typically, programs collect one or more of the following: weight for height (length), weight for age, height (length) for age, arm circumference for age. Each of these provides different information about a child's nutritional status; no one measure is the best predictor of health under all conditions. The choice of which method(s) to use therefore varies among program sites depending on the purposes for collecting the data.

Many theoreticians have supported the use of weight for height (length) as a single measure in nutrition intervention programs because it is independent of general differences among ethnic groups and identifies those children currently suffering from acute malnutrition and in need of immediate treatment. (41, 123) As the measure is independent of age, it avoids any difficulties attendant upon estimating the child's age; both measurements used are objective and repeatable. At the same time this is less reliable as a monitoring tool; if children gain height as well as weight, the degree of nutritional rehabilitation may be masked. In addition, children who are both stunted and underweight often appear normal using this combined measure. Further, taking weight height, and recumbent length (for infants under two) requires more time in training staff and in data collection on site.

Height for age has been seen as acceptable in homogeneous populations but leaves much to be desired when representatives of many different body types reside in the same area, as is common in the United States and some African countries. The fine boned Ethiopians are sometimes contrasted with the heavier framed Yoruba, even though their average height is very similar. Sudden onslaughts of disease or famine also bring about problems for height for age, since these would not significantly alter the height already attained and yet usually lower body weight radically.

Some researchers have employed arm circumference and other anthropometric measures with all and any one of the weight, height, and age combination measures. Those are difficult to perform, however, and it is relatively easy to err in the measurement. Staff must receive specialized training and additional equipment is required. Consequently, the main uses of anthropometric measures are in detailed research and in confirmation studies related to other measures (41).

The last measure, weight for age, has been used most frequently

and consistently throughout the world in nutrition intervention programs aimed at preschool children. Weight is the most sensitive measure of the day to day changes in the nutritional status of a young child (81) and is, therefore, highly useful in monitoring programs. Studies in Bangladesh have shown weight for age to be the most reliable indicator of mortality risks for children up to five years of age (26). Weight gain is also used as the typical measure of program success and it is especially effective as a nutrition education tool aimed at mothers (88). Portable scales can be used in field programs and auxiliary staff can be trained to measure weights with a high degree of accuracy. The major drawbacks to using this measure are problems estimating age of some children, as noted earlier, and the fact that short children may be wrongly diagnosed as malnourished. However, in situations where only one comparative measure can be collected, weight for age is generally preferred.

Standards and Norms

Once the measurements have been collected, evaluation of the nutritional status of a child or a group is based on comparison with a norm or standard. Currently there are three sets of standards typically applied to preschool children. The first two have been widely used in international programs in the past few decades. The third standard has been incorporated into the nutrition surveillance activities conducted by the Center for Disease Control in various public health programs throughout the United States.

Harvard Standards: The Harvard Standards were derived from a study by Stuart on a small sample of Caucasian children in the United States (97). The study was conducted from 1930-1939, and the children used were considered to be adequately nourished. The Harvard Standards have been used as the norm for much of the work done in Latin America and Asia, as well as some African countries. In addition, they appear to form the basis for the CRS Growth Surveillance System.

Tanner Standards: Tanner collected data on a homogeneous population of British children to formulate growth standards for Great Britain. These standards have been used extensively throughout Africa (98). The Road to Health System developed as a result of David Morley's work, which has been adopted by Ghana's Ministry of Health for use in their clinics, is derived from the Tanner standards.

National Center for Health Statistics (NCHS) Standards: These standards are based on data from three massive data collections of a random sample of the United States population from a variety of ethnic and economic backgrounds (62, 63, 64). The NCHS standards are slightly lower than those of Harvard and Tanner because the sample was much more heterogeneous than the other two. Many of the studies conducted since the standards and growth

charts were first printed have begun using the NCHS standards, notably the 1977 Togo Nutrition Status Survey (99).

The decision about which standard to use for a specific population or ethnic group is often problematical. There are differences in weight and height data from one group to another, and there is no conclusive evidence whether these are due to genetic or environmental influences. To counter these problems, researchers in Colombia, The Philippines, and India have developed country-specific standards. However, this is a time consuming and costly endeavor. Further, studies on these children cannot then be compared with those from other countries since they are based on different standards.

COMPARATIVE USE OF GROWTH MEASURES

A preliminary report on a growth monitoring study conducted in Ethiopia, published in 1980, highlighted many of the unresolved problems with the various measures and systems currently in use (56). While Ethiopians differ in some ways from other populations in Africa and do not consider themselves to be "ethnically" African, the study data point up the differing results of using different measures. At the time the report was issued, only descriptive statistics were included.* The fourth measure, arm circumference, will be excluded from the discussion since the age range for that measure was different.

This study reported that in the group of Ethiopian children studied, the percentages meeting the Harvard standard for each measure were as follows:

| | | |
|-------------------|---|--------|
| Weight for length | = | 56.54% |
| Length for age | = | 28.72% |
| Weight for age | = | 19.25% |

Comparing this recent data with data produced in earlier Ethiopian studies also showed the closest correspondence to be with the weight for length measurements, although the percentage was not quite as high (79). The earlier studies differed most in the percentage of children found in the categories of the 60th percentile and below on the Harvard standard:

| | | |
|-------------------|---|--------|
| Weight for length | = | 2.41% |
| Length for age | = | 3.30% |
| Weight for age | = | 10.82% |

* Caution is urged with interpreting tables presented in Appendix H since no analyses of variance or tests for significance were applied to the data. Additionally, not every child was included in all four measures.

The report noted that the percentage from the weight for age measure was closer to the one given in the earlier studies. The Road to Health charts are in common use in Ethiopia so, although their use was not specified, it is presumed that the categories of that system were utilized.

Though Ethiopia is not an object of study in this evaluation, even this preliminary Ethiopian report illustrates some of the effects of using different measures and systems. The fact of such differences is germane to the discussions in this section of the report.

The exact data utilized in the formulation of the Growth Surveillance System charts were not available to the evaluators. The brief process description (20) and accounts in other general publications about growth monitoring systems suggest that the Harvard standards modified according to data on African children were used as a base. Sizeable differences in some weight for age categories exist between the Harvard standards and the present CRS charts, indicating that substantial modifications were indeed made.

Catholic Relief Services' Growth Surveillance System consists of a chart for each individual child plus a master chart on which all measurements from a given clinic are recorded. (Copies of these charts are found in Appendix D.) Each child is weighed and their weight for age point is plotted on the master chart. The percentile ranking for that reading is then transferred from that master chart to the child's individual card. Therefore, each child's card shows only the percentile ranking and not the actual weight in kilograms or pounds. The mother is instructed that her child is doing well as long as the dots on the card remain within the green shaded area.

The omission of the actual weights from the individual chart was the single most frequent criticism by center staff members about the GSS system. They stated that mothers have difficulty in understanding a chart in percentiles, even after the concept is explained and they are told that the connected lines, indicating repeated weighings, portray the general progress, or lack of it, of the child. Further, clinic staff members often referred to the child's weight during the counseling sessions.

A similar criticism of the GSS card versus the Road to Health card was also noted in the Upper Volta Food For Peace evaluation (69). CRS responded that this criticism was not valid as illiterate mothers could not be expected to understand percentiles or the explanation of them (17). However, this was exactly the point of the Upper Volta criticism, as a major use of the growth chart is supposed to be for the nutrition education of mothers. It is vital that they be able to understand the concepts used. While some clinic staff did write in the child's weight on the GSS cards, the graphic illustration of weight change was obscured under this system.

In addition, the Road to Health charts used by Ghana's Ministry of Health were strongly supported by interviewed center staff members because they did provide a visual record of the child's weight gain or loss. They felt that the concept of gaining weight was easier for the mothers to understand when graphed on a chart where the curve rises instead of remaining flat. Further, the Road to Health cards are provided free by the Ministry of Health, and a flannelgraph set for nutrition education is available for use with it. The study of the use of growth charts in nutrition education activities, which found them to be good teaching tools in African countries, including Ghana, was based on the use of the Road to Health system (33).

A further difference between the GSS and Road to Health systems can be seen in Graphs VIII, which illustrates the approximate GSS normal weight bands (dotted lines) superimposed on a Ministry of Health Road to Health chart. A difference, sometimes as much as a kilogram, can be noted between the 100th percentile line of the GSS (the upper dotted line) and the upper normal line of the Road to Health. Since both of these are solidly within the normal weight range, the differences are of no great consequence under the present criterion for issuing rations (everyone that fulfills the procedures at the distribution clinic). Should these ever come a time when some ranking were used as a criterion, the 10th percentile (which would be about half way between the lines dotted lines and the two solid lines), a few more children would be excluded from the rations under the GSS system.

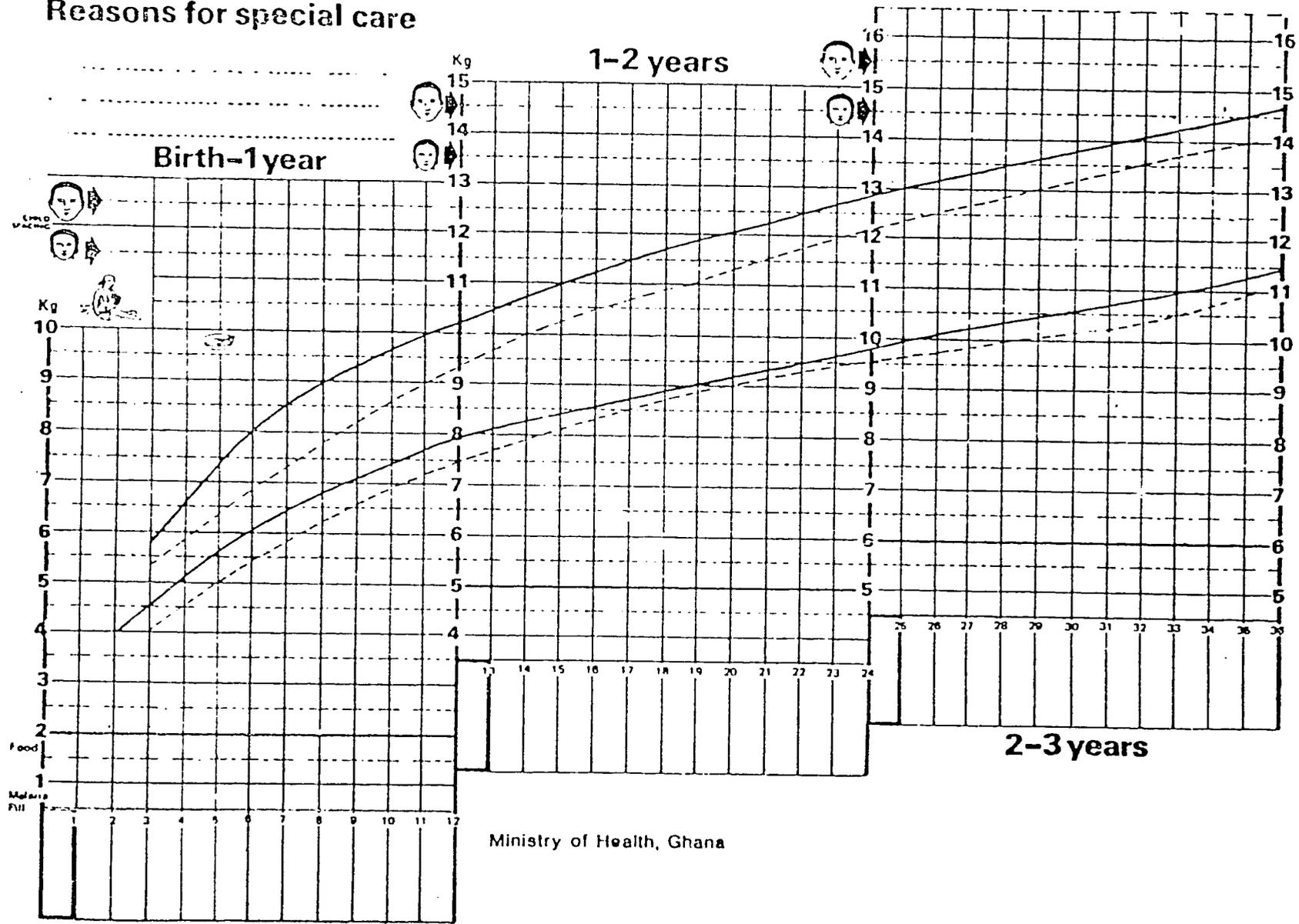
The 80th percentile lines of the two systems are quite close together; only a half a kilogram separates them at the widest divergence, and it is less from beginning to 15 months at some ages. Very few children would be excluded if the 80th percentile were used as a rations criterion. Note also that the two curves are quite similar for both systems; the GSS lines are originally more flattened at some ages. No appreciable differences can be said to characterize the two.

While, as previously mentioned, the GSS individual chart does not give individual weights as does the chart for the Road to Health, the inclusion on the GSS master chart of the bands for the other important percentiles, especially those below the 80th, has considerable informational value to the health workers. The very high risk zone, from the 60th percentile downward, is easily perceived on the GSS chart, since the bands are clearly marked. A similar arrangement would improve the Road to Health chart.

During the field visits, the researchers noted that many clinicians used the Road to Health individual charts and the GSS master chart. Since both record the weights, no inherent errors were observed in using the combination. Some amount of inexactness may occur during the pressured clinic operations in localities where the doctor either charts and transferring the information

Graphic VIII: Road to Health Chart with Its Normal Weight Range Band and Superimposed GSS Band

Reasons for special care



from one chart to another. The same type of mechanical error was also noted in clinics using both GSS charts.

The incidence of malnutrition for the country as a whole, as shown in both Ministry of Health studies (using the Road to Health weight for age measure) and those by Catholic Relief Services (using the GSS weight for age measure) are in close agreement. The similarities in the findings tend to lend credence to the use of combinations of them. The systems seem to function well within the stated limitations of their procedures.

INTERPRETATIONS OF THE GSS DATA

Each MCH center that participates in the Food For Peace program is expected to submit its master chart or charts every month. Tardiness on the part of some center managers and the vagaries of the postal system cause CRS/Accra many problems in compiling the data. Further, the recent AID grant study conducted by CRS in Ghana noted several difficulties with the data themselves. CRS candidly discussed some inaccuracies in the master chart plots, incomplete charts, and inconsistent attendance of the children. The study report (19, p. 240) recognized the effects of the high pressure work during the clinics, citing that in the latter part of the study "...as the novelty wore off, plotting master charts became simply another task, and the percentage of centers reporting accurately dropped from 95% to 60%." Another facet of that problem was the turnover of the staff that had been trained and the consequent unfamiliarity with the system of newly appointed staff.

While the evaluation team did not study nearly as many master charts in as much detail as did CRS, those examined in the centers tended to confirm the report's statements. Observations at weighing and recording time showed some inaccuracies in both, although these appeared to be small. Since the personnel knew they were being evaluated, the procedures may well have been somewhat more precise than on a normal clinic day. More errors were observed in the transfer of the information from the master to the individual chart, the recommended procedure, than in the weighing or the initial plotting on the master chart. The difference in size of the grids, and the fact that the months and kilograms were placed between the lines of the grids, appeared to affect the transfer plotting.

The evaluation team also compared the number of children served by a clinic with the dots on the master charts. As CRS had found, many of the charts were incomplete, showing fewer children than the number actually served. The discrepancy between the two varied a great deal from clinic to clinic, with the lowest differences found for hospitals and malnutrition clinics and the highest for some operations conducted at subclinics and out stations where working conditions were sometimes less than ideal. As did CRS, the team often sympathized with the busy staff, but

that does not change the insufficiency of the data. One other factor found by the study was the some multi-clinic operations did not prepare a chart for each clinic every month. Some said frankly that they "rotated the clinic reports" across the months.

The team was also able to calculate the attendance in several clinics across three consecutive months. In one clinic 46% of the children appeared all three months; in the others the consecutive attendance was about 40%. An examination of the percentile ranking of most of those that failed to attend indicated quite even distribution across the 70th to the 100th percentiles. Those at about the 60th percentile, however, were much more likely to attend, no doubt because the mothers were worried about their welfare. It appeared that some increase in the proportion of the children at these weight categories would be evident in the data. Since in most of the sample MCH sites, except the Upper Region where attendance was uniformly quite high, the percentage of children in the lower categories was relatively small (from 1 to 13%), their increased attendance was not seen, in itself as a major contaminant of the data.

The net result of the attendance problem was that the data for any two months often contained quite different children. Some were consistently attending, others appeared only occasionally, and a number of others (varying from just under 20% to slightly over 30%) were totally new to the surveillance system in any one month. The team found it difficult to make meaningful comparisons across time; the search for children with six months beginning and ending weights often reduced the available number by more than 80%. The hospitals and the malnutrition clinics had by far the best records and the fewest observed inaccuracies. Further, only one small malnutrition ward in a hospital was more than a month behind in its reporting. The greater percentage of children included on the charts from these institutions, when coupled with the higher ratio of seriously underweight children, were expected to have a downward impact on the CRS data.

The conditions cited by CRS/Ghana and those additional ones found by the evaluation team highlight the need to use great caution in utilizing master chart data for making major program decisions. Each monthly chart, even when accurate for that point in time, reflects a mixed set of clients that cannot be defined except by intensive study in the centers. When dozens of "mixed" charts are aggregated, it is unclear what that compilation indicates. Still greater interpretation difficulties would exist when weight rankings over time are studied. The advice by CRS itself, to be very careful about inferences, is well taken.

The cumulative effect of these master chart data problems is well illustrated in regional graphs presented in Appendix 1 of the grant study report (19). The proportions of Upper Region

children falling below the 80th percentile, for example, varied between 39% and 54% over a two year period. The Northern Region group differed by 16% over a two month span. No background information on total number of children served, total number on the charts, and the numbers represented by the percentages was given. The combination of the widely varying percentages and the lack of supporting data re-emphasizes the tentative nature of conclusions drawn from master chart numbers. The only immediate suggestion for the dilemma would be a more precise follow up study, using individual children over time, obviously an enormous task in terms of both money and effort. Nevertheless, some further probes into the collection of more reliable data are needed to improve the decision making process.

IMPLICATIONS OF THE GROWTH MONITORING SYSTEM

The reviews of the several growth standards and the monitoring systems revealed that, while some may be more accurate under certain conditions than others, there are also vast differences in the skills, time, and equipment needed for their implementation. The CRS Growth Surveillance System, weight for age, has been considered by many practitioners as the most appropriate for field operations. The GSS was said to be based on the Harvard standards and was modified, apparently, to account for differences among the African and other populations. It varied somewhat from the Road to Health standards, as modified by Morley from Tanner's work in Great Britain. The differences were not large and were expected to have no important effects unless a cutoff percentile were adopted that would reduce the number of children served.

The Growth Surveillance System implemented by Catholic Relief Services in Ghana serves three main purposes: to identify pre-school children in the high risk categories, to monitor program impact on recipients, and to serve as the basis of the nutrition education for mothers. As a screening tool, it is comparable with the Road to Health system. There was no evidence that one set of standards was more applicable to the Ghanaian population than the other.

On an individual basis, the child's card used under either system provided monitoring information. For the population as a whole, the Road to Health system does not collect aggregate data. While the GSS master chart was designed to collect group data, the problems with analyzing those data are legion. The collection and reporting procedures, especially those relating to varying children in the different monthly reports, need some revision. The GSS child chart marks progress in percentiles, difficult for mothers to comprehend. The Road to Health chart does not contain the 60th percentile line, one that is valuable as a diagnostic indicator for health workers. These variables led the evaluation team to suggest some improvements for both.

Recommendations:

CRS should consider entering the weights on the individual child charts.

The Ghana Ministry of Health should consider adding the 60th percentile line to its Road to Health charts.

CRS should avoid making group judgments based on the aggregate data in the monthly GSS master charts

When group or regional judgments need to be examined, CRS should conduct at least a sample study that follows up individual children.

The interviewed distribution center staff members overwhelmingly preferred the Road to Health chart for individual children. To some degree, this popularity derived from their greater familiarity with it. CRS preferred the GSS individual chart and pressure was noted to increase its use. However, based on the field observations, the evaluation team concluded that both charts serve the objective portions of the data collection effort. Each has an advantage. No difficulties were found with using both charts in conjunction with the GSS master chart.

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CHAPTER VII: PROGRAM IMPACTS

The Food For Peace program has operated in Ghana since 1959; during that time the program has provided substantial inputs into Ghana's economy in the form of donated commodities and staff expertise. At the same time, the Government of Ghana has provided the needed in-country support for management and transportation of commodities as well as the local personnel to run the majority of the distribution centers. The program has thus entailed a major expenditure of funds by the governments of the United States and Ghana for 22 years without a comprehensive external evaluation of the program's impact. The program was reviewed in 1972 as part of an evaluation of PL 480 in eight countries; at that time no attempt was made to measure impact. (25)

A major aspect of the present evaluation is the analysis of program impact during the year under review, FY 81. As this is a nutrition intervention program, much of the data collection and analysis centered on nutritional impact on individual recipients. However, Catholic Relief Services stated two additional objectives for the Food For Peace program in Ghana: the improvement of family economy and diets and the improvement of the economy of the country as a whole. Some information was collected on these important areas. Finally, the consideration of program impact must also analyze the extent to which Title II in Ghana helps bridge the gap between the identified nutritional needs and priorities of the country and Ghana's internal capabilities for meeting those needs.

BACKGROUND TO NUTRITIONAL IMPACT

In attempting to study the nutritional impact of the Food for Peace program in Ghana, it was impossible to isolate Title II inputs from those of other programs in the country. Because the work of the distribution centers involved more than food distribution, some recognition must be made of the interactions with the health care and educational systems in Ghana. In addition, foodstuffs and nutritional supplements donated by other countries, particularly the EEC member nations, often supplemented the commodities received by participants. Finally, Catholic Relief Services also coordinated the provision of some needed medical supplies and vaccines to many of the distribution sites; without immunizations the effect of the supplementary feeding program would have been muted. Thus, the analysis of nutritional impact contained in this chapter is presented within that broader context.

Regional differences in dietary patterns and agricultural production in Ghana have been well documented, and earlier food consumption studies and nutrition surveys have described the major nutritional problems seen throughout the country. Those

data are summarized here as a background to the discussion of nutritional impact seen from the various programs in Ghana. For a fuller analysis of this information, the reader is referred to the studies and documents themselves. (Each is listed in the bibliography.)

The direct and indirect measures of nutritional impact used for this evaluation are discussed in great detail in this chapter. The limitations to the measures, both inherent and within the specific programs in Ghana, are also identified. Finally, several suggestions are made for small scale evaluation studies that could be conducted by the Government of Ghana, USAID, and/or Catholic Relief Services, with the cooperation of field personnel, and could help provide additional nutritional impact data.

Nutritional Geography of Ghana

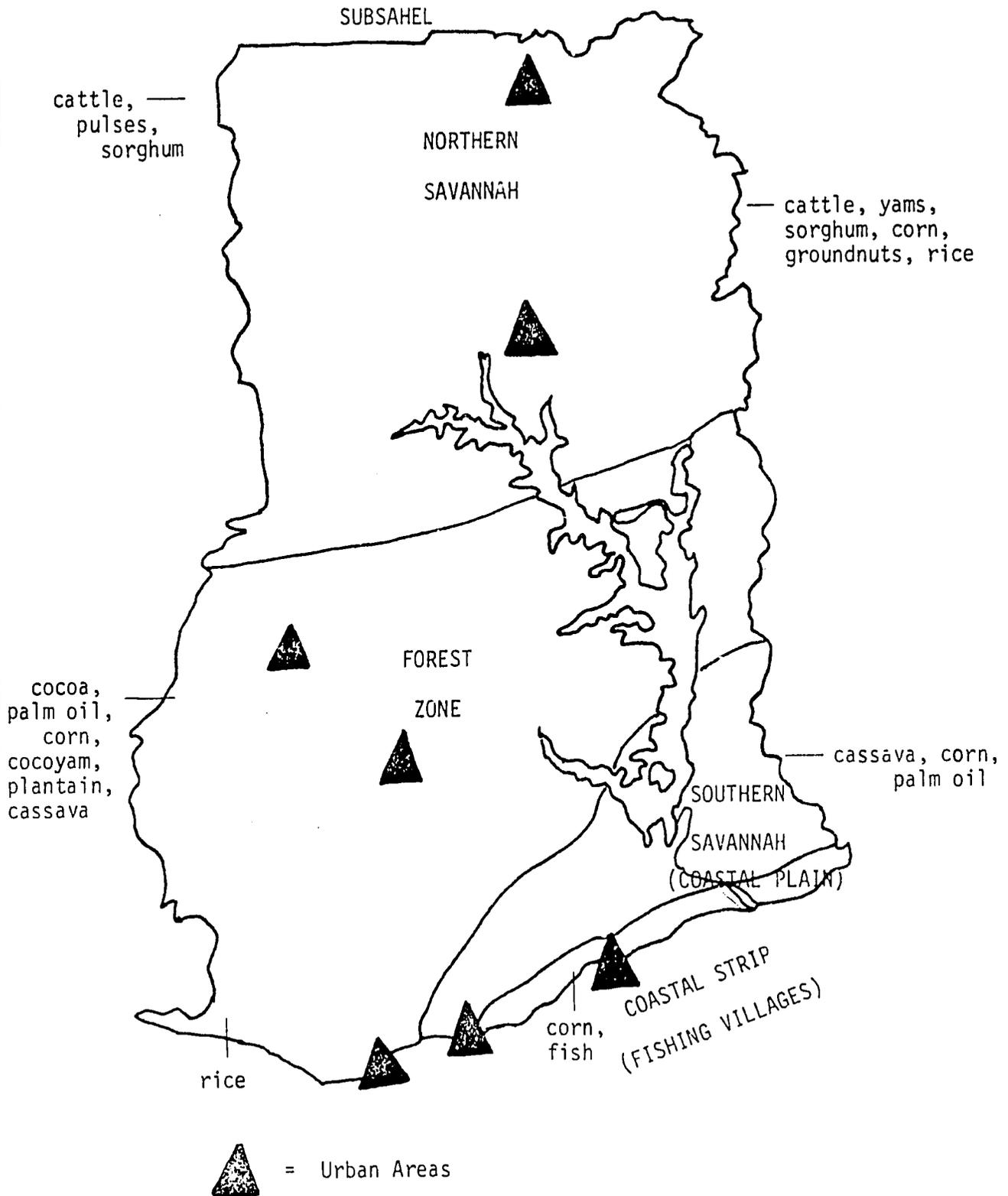
The Nutrition Division of Ghana's Ministry of Health divided the country into five major areas in terms of food consumption and dietary habits: the Northern Savannah, the Forest Zone, the Southern Savannah (Coastal Plain), the Coastal Strip and Fishing Villages, and Urban Areas.* The five areas are shown in Graphic IX, the Nutritional Geography of Ghana. Each area shows a characteristic dietary pattern although there is a large amount of overlap between areas, especially in the transitional zones. The most pronounced differences are those between the northern and southern areas of the country, with the major source of calories in the north coming from grains and in the south deriving from starchy roots and tubers. Agriculture in the Northern Savannah is much more marginal/subsistence and subject to sudden crop failures, particularly in recent years.

Northern Savannah: The major food crops in the Northern Savannah are grasses, particularly two varieties of sorghum (called millet and guinea corn locally**), as well as some yams, rice, and groundnuts (peanuts). The food supply is seasonal, primarily depending on one harvest with shortages and scarcity occurring during the long dry season. Food supplies are at their lowest from May to July when the farmers are planting their major crops. During this "hungry season" food is so scarce that many people eat only once every two or three days. If children are attending a school with a school feeding program, that meal may be the only food they eat on those days. Livestock include cattle, sheep,

* The major sources for this discussion are: GHANA, NUTRITION DIVISION, MINISTRY OF HEALTH (55), AND BEAMER & GANGLOFF (11).

** Sorghum (*sorghum vulgare*) and millet (*panicum miliaceum*) are very different grains that are not closely related. Because this report is meant for general readership, the text will refer to large grain sorghum (guinea corn) and small grain sorghum (millet).

Graphic IX: Nutritional Geography of Ghana



From: Nutrition Division, Ministry of Health (55)

goats, guinea fowl and other poultry, but these are not a major component of the diet. Vegetable protein foods used include peanuts (groundnuts) and beans, as well as dawadawa (fermented locust bean seeds) and yeast residue from brewing pito (a sorghum beer). The latter two are high in protein but are used in limited amounts. The mainstay of the diet is a small sorghum, usually ground and boiled with water into a thick porridge called tuo zaafi. It is also made from other sorghums and white corn. The supply of fresh fruits and vegetables is also seasonal; during the dry season dried leaves and okra are used. Most of the fresh vegetables grown are sold to obtain money for buying grains. Limited use is made of fats in the northern diets. The major source of fat there is "butter" made from the shea nut, but much of the production is used for skin cream rather than consumed in the diet.

The Northern Savannah area included both the Upper and Northern Regions of Ghana, as well as the northern portion of Brong Ahafo Region. There are some differences among all the regions, with crop production and food availability generally improved toward the south. The Upper Region is more densely populated, with an average of 100 people per square mile. The major crop in the Upper Region is the small sorghum; farther south, in the Northern and Brong Ahafo regions, yams and rice are the most important crops, although much of the rice is grown for sale rather than for local consumption. The Northern Region also is subject to drought and sudden crop failure but the food supply in both Northern and Brong Ahafo generally is more dependable than that of the Upper Region.

Forest Zone: The Forest Zone dietary pattern relies heavily on starchy roots and tubers, and these are found throughout much of central and southern Ghana. They may be boiled, fried, or ash-roasted in the original form, but they are more often pounded and boiled with water into the starchy staples such as fufu and banku. Fufu is produced typically from cassava or plantain, but it may be mixed with yam in certain areas. Other dishes are made from dried cassava granules (gari) or powdered cassava root (kokonte).

The cereal-based preparations include kenkey (fermented corn dough), banku, and apkle (fermented corn, sorghum, or cassava dough). The latter two generally are a combination of grain and cassava flour and can be made using both the WSB and SFSG from Title II.

In the farming areas of the Forest Zone the main meal is eaten in the evening and consists of the starchy staple (fufu or banku, for example) with either a "light soup" (basically broth) or some type of vegetable sauce with palm nut oil. Soups or stews containing more protein - dried fish, snails, game (bushmeat), pounded beans, peanut paste, melon seeds - and palm nut oil are prepared on non-farming days when there is more time

for lengthy cooking. However, the amount of protein supplied by the diets generally is insufficient to meet recommended allowances for family members, particularly the high risk groups (weaning children, pregnant and lactating women). In some areas the protein content of the diet may be as low as 2% (11). (See Table 20 for the nutrient values of some common foods.)

As can be seen on Graphic IX, the Nutritional Geography of Ghana, there are both urban and peri-urban areas as well as fishing villages throughout the Forest Zone, where the dietary patterns may contain more protein as well as a wider variety of foods. Town dwellers in this zone also are somewhat more likely to have better balanced diets than the farmers.

Coastal Plain (Southern Savannah): The Coastal Plain is another savannah area and is not well suited to agriculture; the major crops are cassava, corn, and palm nut oil. Farming is mostly subsistence but droughts are not as frequent a problem here as they are in the north. With the use of fertilizer, corn can be grown as a cash crop. Beans are not reliable in this climate and the major sources of protein in the diet are fish from the Volta Lake and the Atlantic Ocean, and white corn. Food is generally available to families with sufficient income because of the access to fish and the possibility of selling some crops for cash. The dietary staples are corn based, either fermented corn dough or fermented corn and cassava dough eaten with stews or soups. Palm nuts and palm oil are used widely in this area, primarily in soups and stews; the major vegetables eaten are okra and tomatoes.

Coast Strip and Fishing Villages: The main foods of the coast strip (along the Atlantic Ocean) and the fishing villages (around Volta Lake) are fish and white corn. This is the only area in the country where more than ten percent of the total calories is supplied by animal foods. In addition, a fair amount of oil is consumed in the diet through frying fish and preparing vegetables. The coastal people also consume considerable quantities of corn, tomatoes, and green leaves. In the fishing areas, food supply is not as much of a problem as it is in other areas of Ghana. Many of the cases of malnutrition stem from the lack of hygiene, as children with hookworms and other parasites are not able to digest and properly absorb the nutrients in food.

Urban Areas: Because of the fairly well developed market system in Ghana, the food supplies in the urban areas tend to be more plentiful and varied than in the smaller villages and rural areas. In recent years the supplies to the north have become less reliable because of the transportation difficulties, but urban centers in the southern half of the country are well supplied with food. Because of the ease of transport and storage, cassava and cassava dough are widely available, while the more perishable starches, such as yam and plantain, are more

expensive and less plentiful. Rice and wheat also have become staples in the urban areas because they are easy to transport, store, and prepare.

Most urban people are involved in salaried employment or trading and therefore food raising activities are generally restricted to small market gardens or to farms that are tended during the weekend in outlying areas. The purchase of prepared foods from roadside vendors also furnishes an important part of the diet of many urban dwellers. Assuming that the money is available, the quantity and quality of foods for urban families generally is sufficient to meet their nutritional needs, although the high prices may limit what they can purchase.

In the peri-urban areas the situation is not as favorable, as the workers who are paid the minimum wage seldom have enough money to purchase all the foods their families need. In addition, as they generally have to walk to work and do not have easy access to land, they neither have the time nor the energy for raising foods to supplement the family diet. Although statistical information is not available on the incidence of malnutrition among the urban poor, health professionals who work in the clinics in those areas estimate that some of their clients are as malnourished as many of the worst cases in the rural areas.

Dietary Practices in Ghana

As can be gleaned from the preceding discussion, the major differences in nutritional intake throughout Ghana depend on the staples used and on the quantities or prices of foods available. Daily food intake usually consists of from one to three meals, depending on daily activities and the availability of food. A general exception to this is during the "hungry season" in the north when the people may consume only one meal every second or third day. The meals consist of the staple food (grain based in the north and produced from starchy roots and tubers in the south) combined with a "sauce" (soup or stew). The sauce contains vegetables (typically okra, pounded leaves, onions, and/or tomatoes); seasonings (particularly hot peppers); protein food (small amounts of meat, poultry, fish, other animal proteins, pounded beans, ground melon seeds, peanut paste, or dawadawa); and whatever oil or fat may be used. The sauces therefore supply protein, vitamins, and minerals in various amounts, depending on the ingredients and the preparation.

The family's food is generally prepared at one time and in one pot, as both cooking utensils and fuel are in short supply. The males are fed first, then the children, and then women last. Often the youngest children will share the same bowl, and the protein foods in the sauce may be difficult for them to chew or digest (i.e., small dried fish or chunks of tough meat). Many farming families eat only one meal a day, which may be enough

to meet the minimum caloric and protein needs of adults. However, young children need more frequent feeding in smaller amounts in order to be adequately nourished.

Regional differences are seen in infant feeding practices which, in some areas, are affected by various food taboos or prejudices. Children are breastfed for at least 12 months in the urban areas and for up to two years or more in northern Ghana. The introduction of solid foods usually begins at six to nine months of age, although there has been a substantial health education campaign throughout the country to encourage mothers to begin this at four months of age. The first supplemental food is koko, a thin gruel or pap made of ingredients available locally. This means that it is more likely to be made from grains in the north and from starchy roots and tubers in the south. In addition, koko is often the morning food for the rest of the family, served with bread if available. It may be spiced with red peppers or fresh ginger, or made from one of the fermented products. Unless especially prepared for an infant, the koko may not be palatable to a four month old child. Once a child is started on koko, the intake of both calories and protein may be substantially reduced unless the mother is trained to fortify the koko with additional protein and calories.

Most of the food taboos in Ghana that have nutritional implications are those that concern the feeding of protein rich foods to women and preschool children. Because eggs are considered a symbol of life, they are sometimes prohibited for pregnant women and young children. In some areas there is a belief that if a pregnant woman eats meat or fish she will have a large child and a difficult delivery. In many fishing villages, fish are not fed to very young children for fear that they will: "(a) get worms, (b) get diarrhea, (c) become thieves," (d) choke on bones (53). While the taboos generally are nutritionally harmful to women and children, in certain instances they can be used to encourage better dietary habits. Thus in one village a "magic" power to cure kwashiorkor is attributed to eggs which are fed to children in spite of the traditional taboo. In another village the Wheat Soy Blend (WSB) and Soy Fortified Sorghum Grits (SESG) supplied by the Food For Peace program were considered "unsuitable" for men and older boys and were saved for preschool children and women.

Malnutrition in Ghana: Results of Studies and Surveys

Much of the information concerning the nutritional status of the Ghanaian population is derived from the national nutrition survey conducted in 1961-1962 (84). Smaller studies have been conducted since that time which tend to validate those findings (56, 83). In addition, with the recent economic problems in the country, as well as the drought problems in the past few years, it is reasonable to assume that the nutritional problems identified in past studies still exist.

Results of these nutrition studies in Ghana define the high risk groups in terms of age and sex (preschool children, pregnant and lactating women) and in terms of geography (Upper and parts of the Brong Ahafo and Northern Regions, and rural areas). The most important data are as follows:

- . 40-50% of all children aged 1 through 4 was underweight;
- . 18% of the children examined in the national nutrition survey showed clinical signs of malnutrition;
- . from the age of 9 months to 5 years the average Ghanaian child received only 50% of protein requirements and 70% of caloric requirements;
- . the growth rate of many Ghanaian children equaled that of European children until 6 months of age; then it slowed down until about the age of 5;
- . adults in northern Ghana received 80% of their caloric requirements on the average; during the "hungry season" this percentage decreased to 60%;
- . in Northern and Upper Regions, 30% of males and 50% of females were chronically underweight;

Ghanaian adults suffered definite weight losses during the "hungry season," which were sometimes but not always regained at harvest time:

- Northern and Upper Regions 9-10 lbs.
 - Forest Zone 5 lbs.
 - West and Central areas 3-4 lbs.
 - Accra area 2-4½ lbs.
- . in the Upper Region 37% of the adults examined had clinical symptoms of malnutrition;
 - . town and urban dwellers were on the average better nourished than rural people;
 - . other nutritional deficiencies in the north included widespread vitamin A deficiency and endemic goiter;
 - . iron deficiency anemia was a common problem in many parts of Ghana because of the parasites and infections.

A more recent study of an urban clinic in the Greater Accra area (44) showed a high incidence of underweight children even though the rate of clinically diagnosed malnutrition was less than 2%.

An average of 31.5% of the children below 5 years of age seen in the clinic was found at less than 80% of weight for age. While this is not as high as figures reported from the national nutrition survey, it indicated that nearly one-third of the supposedly better nourished urban dwellers was at nutritional risk. This incidence of underweight also was correlated closely with the incidence of measles; 32.6% of the children in this category had measles. The role of measles in precipitating severe malnutrition and in causing infant deaths has been well documented and further points to the nutritional vulnerability of this urban clinic population (80).

Protein Calorie Malnutrition

The major forms of malnutrition seen in preschool children in Ghana are classified under the heading of "protein calorie malnutrition." Protein calorie malnutrition (PCM), or protein energy malnutrition (PEM), describes a range of clinical symptoms of malnutrition, the most important of which are kwashiorkor and nutritional marasmus. Kwashiorkor was first identified in the 1920s by a pediatrician working in Ghana. It is a word from the Ga language and translates as "disease that occurs when displaced from the breast by another child." It results from a diet that is severely deficient in protein, with the calorie intake from carbohydrate being sufficient or nearly so. It occurs most commonly after the child has been completely weaned, generally between 18 and 42 months. When children are weaned earlier, as is beginning to happen more often in the urban areas of southern Ghana, kwashiorkor also begins at an earlier age. As long as the mother continues to breast feed, the child obtains some amount of high quality protein not found in the starchy weaning foods. Both growth retardation and edema (water retention in the tissues) are present in kwashiorkor, and the child is miserable and apathetic. Treatment requires an adequate supply of high quality protein as well as enough calories to meet the child's energy needs. (Table 20)

Nutritional marasmus usually develops in younger children and results from a diet that is inadequate in calories as well as in protein: in essence, a starvation diet. In the first year of life it occurs typically when there has been a failure of breast feeding and the child is being fed diluted or contaminated formulas that cause diarrhea, reducing digestion. Late marasmus can occur in older children who are still being breast fed without receiving adequate supplemental foods necessary to meet their energy requirements; it can also occur in later life as a response to starvation. Marasmic children have extreme growth retardation and are generally below the 60th percentile of expected weight for age. In addition, there is a marked wasting of muscles and a lack of body fat. Treatment focuses on providing sufficient protein and calories in the diet without overloading the child's digestive system with too much food at any

Table 20: Nutritional Composition of Selected Foods Used in Ghana, Per 100 Grams Edible Portion*

| ITEM | CALORIES | PROTEIN | FAT | CARBOHYDRATE (Total, including fiber) |
|----------------------------|----------|---------|------|---------------------------------------|
| | | g | g | g |
| <u>GRAINS</u> | | | | |
| Sorghum, large grain | 343 | 9.7 | 3.0 | 74.9 |
| Sorghum, small grain | 352 | 8.4 | 4.3 | 75.8 |
| Corn, white | 359 | 8.8 | 3.9 | 75.1 |
| Rice | 331 | 6.8 | 0.4 | 80.3 |
| Wheat, flour | 335 | 11.4 | 0.9 | 76.2 |
| Corn Dough | 210 | 5.1 | 1.4 | 45.8 |
| Kenkey | 124 | 3.1 | 0.4 | 27.7 |
| <u>VEGETABLES</u> | | | | |
| Amaranthus Leaves | 40 | 4.2 | 0.4 | 7.3 |
| Cocoyam Leaves: Nkantonire | 36 | 2.9 | 0.5 | 7.0 |
| Peppers | 80 | 2.8 | 2.2 | 15.4 |
| Legumes/Pulses: | | | | |
| Dawadawa | 339 | 29.0 | 26.6 | 12.7 |
| Agushie (melon seeds) | 561 | 27.1 | 48.8 | 14.4 |
| Peanuts | 571 | 22.7 | 48.1 | 22.0 |
| Beans | 350 | 21.8 | 1.3 | 64.8 |
| <u>ANIMAL FOODS</u> | | | | |
| Mutton /Chevron | 108 | 17.0 | 3.8 | 0.2 |
| Anchovy, dry smoked | 380 | 68.6 | 3.5 | 14.4 |
| <u>ROOTS AND TUBERS</u> | | | | |
| Cassava: | | | | |
| Cooked | 147 | 0.7 | tr. | 36.1 |
| Fufu | 136 | 0.9 | 0.2 | 32.8 |
| Gari | 350 | 1.5 | 0.2 | 85.3 |
| Cocoyam, cooked | 164 | 1.8 | 0.2 | 38.9 |
| Plantain, unripe cooked | 169 | 2.5 | 0.3 | 84.5 |
| Wateryam | 140 | 2.6 | 0.2 | 32.5 |
| Yam Fufu | 195 | 3.6 | 0.1 | 23.3 |

*Source: EYESON & ANKRAH (39).

one time. Figures from Ghana estimate that 31,000 children are in the category of being clinically diagnosed as suffering from marasmus or kwashiorkor (63, 64).

In addition to those children with clinical symptoms, many children suffer from mild or moderate cases of PCM and they are in the danger zone where any extra strain such as disease or infection can lead to severe PCM. In Ghana another 320,000 children fall into this category. In the preschool child the earliest sign of PCM is growth failure. Children who fall between the 60th and 80th percentiles of weight for age, or who show failure to gain weight normally, should be carefully monitored to prevent the development of severe PCM.

The major impact of malnutrition on preschool children in Ghana comes from its effects of protein calorie malnutrition which results in increased morbidity and mortality, with long term effects on the physical and mental development of survivors. The major effects of malnutrition on women during the childbearing years are increased pregnancy wastage and maternal mortality, as well as other problems such as insufficient lactation, which directly affects the health of children.

Nutritional Contributions of Title II Commodities

Title II commodities are provided to Ghana to help meet the deficit of protein and calories in the diets of preschool and school age children in the country. The standard package for Ghana consists of specified amounts of Wheat Soy Blend (WSB), Soy Fortified Sorghum Grits (SFSG), and Soybean Salad Oil. WSB is a blended and protein fortified powder, with supplemental vitamins and minerals. It is used primarily to improve the nutritional value of cooked foods given to weaning infants and young children. SFSG is a processed grain product with added protein, suitable for use with older children. In Ghana, SFSG is sometimes re-ground or pounded in the same manner as local grains and then may be used in weaning foods. The Soybean Salad Oil is intended to increase the caloric content of the diet and also can be used in general food preparation. (106)

According to the AER for 1981 the monthly ration for preschool children in Ghana in the Maternal and Child Health-Child component of the CRS program was as follows: 2.0 kg of WSB, 2.0 kg of SFSG, and 1.0 liter of soy oil. Table 21 provides a comparison of the theoretical contribution of the monthly ration to the protein and calorie needs of children from 6 months to 4 years based on average requirements established by FAO and WHO (105). As discussed in the earlier chapter on center management, these ration levels were seldom achieved for the majority of children served by the MCH programs visited by the study team for the early part of the fiscal year under review, 1981.

Table 21: Theoretical Contribution of the Standard MCH/Child Ration to the Protein and Energy Requirements of Preschool Children in Ghana*

| Age | Percent of Calories Supplied | Percent of Protein Supplied |
|-------------|------------------------------|-----------------------------|
| 6-11 months | 75 | 120 |
| 1 year | 63 | 114 |
| 2 years | 55 | 104 |
| 3 years | 48 | 89 |
| 4 years | 43 | 80 |

* Assuming 2 kg of WSB, 2 kg of SFSG, and 1 liter of oil.

The total monthly ration for the school feeding and day care centers was smaller than that for the MCH program and consisted of 2.3 kg SFSG and .231 kg of soy oil. In addition, in the programs visited by the team during fieldwork in Ghana, day care centers and schools had received the smallest amounts of food during 1981.

Title II Commodities Use in Ghana

Catholic Relief Services in Ghana has stressed the importance of providing foods in the Title II program that can be easily incorporated into the traditional Ghanaian diets and that are similar to locally available foods. This same message is stressed in the nutrition education provided to participants as part of the food distribution programs. For example, WSB is incorporated into "koko," a porridge used for weaning infants and often served as the breakfast meal for the entire family. In addition, WSB also is incorporated into the starchy staples used throughout the country, such as banku, fufu, apkle, and tuo zaafi. The cooking helps improve the flavor, and mothers reported that the children were very fond of products made with WSB. In addition, the WSB is sometimes cooked and given to mothers with morning sickness as it is easily retained.

Soy Fortified Sorghum Grits are similar to the types of sorghum available in Ghana (guinea corn and millet) and can easily be incorporated into traditional diets. The SFSG is typically milled or pounded and then used to make the starchy staples. Less frequently the mother will cook SFSG like rice, particularly in those areas where rice has been added to the diet as a grain.

The soybean salad oil is added to the ration package in Ghana as a highly concentrated source of calories. When the oil is

available and used by the families, it is most often incorporated into sauces, soups, and stews. In some areas foods, such as fish or plantain chips, may be served fried, and a small amount of oil may be used for this purpose. In southern Ghana, because of the widespread availability of palm nut oil, mothers are accustomed to cooking with oil. This is not the case in northern Ghana, where little oil is produced and thus is not a part of the traditional diet. The Title II oil brings a high price on the black market, because it is highly refined and therefore thought to be a better product than palm nut oil. Therefore, if mothers do sell any of the Title II foods, they are more likely to sell soy oil, particularly in the north where it is not as commonly used in food preparation. The schools and day care programs in Ghana receive SFSG and oil for use in feeding the children on site. These commodities form the basis for the meals but must be supplemented by other foods and seasonings. Generally, the children are required to contribute funds for the other ingredients, and parents are expected to pay some of the expenses of running the day care centers.

During the field visits, mothers and program staff members were questioned about the choice of foods. The response was overwhelmingly favorable, with 80% of the participants and 88% of the program staff members interviewed expressing satisfaction with the foods used. A few of the professionals specifically commented on the need to continue the supply of dried skim milk, particularly for use with the clinical malnutrition cases. It should be noted that many of the MCH programs visited during the field work distributed the milk with Title II commodities, and that at least some of the participants may have considered the milk to be part of the Title II ration. A few respondents also asked that bulgur wheat be distributed through the program as it had been in the past.

Another question on the opinionnaire asked participants and staff whether or not the ration contained an adequate amount of food. The range of answers to this question was wider, although the majority of respondents expressed satisfaction with the amounts as well as with the types of foods. Answers to this question are summarized by respondent type in Table 22. A few mothers felt that the rations should be increased as the child grew, and some felt that some mothers got more food than others. Program staff mainly expressed concern that the rations were not large enough for the sick children and also felt that food should be available for ill adults and older children as well.

As mentioned earlier, it was impossible to single out the effects of the Title II program in Ghana because of the many other assistance programs also operating there. The major foods and supplements available from other programs in Ghana are listed in Table 23. These included both donated foods and various grains and cereals for sale in local markets. In addition to foods that were supplied on a regular basis (such as milk from the

Table 22: Frequency of Participant and Staff Satisfaction Ratings with the Amount of Food Distributed to Title II Participants in Ghana

| Respondent Type | Participants (%) | Staff (%) |
|------------------------|------------------|-----------|
| Completely Agree | 32.4 | 34.3 |
| Agree | 35.2 | 28.4 |
| Neither agree/disagree | 16.2 | 20.9 |
| Disagree | 8.1 | 8.9 |
| Completely disagree | 5.4 | 7.5 |
| No reply/don't know | 2.7 | 0 |

Table 23: Protein and Calorie Content of Donated Foods and Commodities Available to Title II Recipients in Ghana per 100 grams*

| Source | Food or Commodity | Total Calories (per 100 g) | Protein (per 100 g) | Fat (per 100 g) |
|--------------------------------------|-------------------|----------------------------|---------------------|-----------------|
| FFP Title II (donated) | WSB | 360 | 20.0 | 6.0 |
| | SFSG | 360 | 16.0 | 1.0 |
| | Soy Oil | 884 | — | 100.0 |
| FFP Title I (available for purchase) | Rice | 363 | 6.7 | 0.4 |
| | Yellow Corn | 348 | 8.9 | 3.9 |
| WFP | Bulgur Wheat | 354 | 11.2 | 1.5 |
| EEC and Member Countries | Dried Skim Milk | 358 | 35.7 | 0.7 |
| | Lactogen | ** | ** | ** |
| | Babylac | ** | ** | ** |
| | Dried Whole Milk | 502 | 26.4 | 27.5 |

* Sources: CHURCH & CHURCH (39); EYESON & ANKRAH (39); FOMON (40); and USAID.

** Could not be determined.

EEC), many programs, particularly those run by the religious groups, had access to periodic donations from other countries. For example, some of the school feeding programs visited were using rice donated by the People's Republic of China. There had also been one Title II shipment of bulgur wheat to some of the school feeding programs. Some of the hospitals were using condensed milk from Canada, and other programs were distributing double cream dried milk from the Dutch Presbyterian Church. Many parishes from the United States and Europe also provided nuns with vaccines, and with multi-vitamin tablets and syrup.

While all the donated foods and supplements were seen to have some impact on the program centers, an additional contribution to the nutritional status of the Title II participants resulted from the donations of milk and milk-based formulas from the EEC and some of its member countries. These milk products were crucial to the nutritional rehabilitation of marasmus and kwashiorkor patients. In addition, dried skim milk was distributed also in several clinic programs to underweight children in the high risk categories. (The calorie and protein content of these milk products are compared to those of the other foods available to Title II participants in Table 23.) Use of these products in the centers was not standardized; their nutritional contribution depended on what was available to the program at the time, as well as on the number of children receiving the milk products. The EEC is to be highly commended for its contributions in this area, and Catholic Relief Services also deserves credit for their efforts in obtaining and distributing the milk products.

As problems with the use of dried skim milk products in food distribution programs in Africa have been widely reported, it is important to re-emphasize the experience with this product in Ghana, as described under center management. When the milk was used for a formula feeding, it was almost universally done in the hospital, malnutrition clinic, or in the nutrition rehabilitation center under strictly controlled conditions. The milk was mixed with sugar and oil in the proper proportions and prepared and fed under sanitary conditions. When the dried milk was taken home, the mothers were instructed to incorporate it into the koko (porridge) or other cooked product that was then fed to the child. In some programs, the staff pre-mixed the powdered milk with WSB before distributing it to participants.

Because it is a nutritionally sound practice to begin most children on koko at the age of four months or even earlier, it is possible in most cases to entirely avoid using the milk in formula feedings. This also avoids most of the problems that occur when the milk is mixed with contaminated water or when the mixture is too diluted. It also reinforces other nutrition education provided to mothers which teaches them to add small amounts of high protein foods to the koko to increase its nutritional value for their children's health. Within the structure of an extremely

well conceived and well executed program of nutrition education, the use of dried skim milk in Ghana has been very successful.

Program staff reported that the use of double cream dried milk was even more successful because of the higher calorie content. It could be mixed without the added oil, and that was very useful in the north where oil is not commonly used. Again, when incorporated as an additive to koko or other foods, it provided a substantial amount of added calories as well as protein. The rapid weight gain of those children using it was an important educational lesson. Similar experiences were reported with the Lactogen and Babylac, although those products were usually reserved for use with the most severe malnutrition cases.

NUTRITIONAL IMPACT MEASURES

Evaluation of the effectiveness of public health programs is always complicated because the rigorous control necessary for demonstrating direct cause and effect is generally impossible in a real life setting. This is especially true for the Food for Peace program in Ghana because of the wide variations in program operations seen throughout the country. Several factors specifically affected the quality and the significance of the nutritional impact data gathered. In the first place, the Maternal Child Health children entered the program in various stages of nutrition and health, and they received vastly different inputs from the centers during their participation. Because of the limited time frame for conducting the evaluation study (less than three weeks of field time in Ghana), it was necessary to depend almost entirely on data maintained by the centers. These data varied considerably from site to site in quality and comprehensiveness. Also data could only be collected from MCH programs, as the schools and day nurseries visited did not maintain children's health and weight records. Finally, there were the problems inherent in trying to demonstrate nutritional impact in a short term study when what is actually involved is long term effects.

Both direct and indirect measures of nutritional impact were collected during the field visits. The primary direct measure utilized was the weight change over time of individual recipients. These data were gathered from the clinic/hospital records, where available, or directly from the children's health cards during the clinic operations. In some centers where only master chart data were present, these were also gathered. The day care and school feeding programs could not supply weight information. Indirect measures included changes in dietary habits and nutrition related knowledge. This information came primarily from the participant surveys and opinionnaires and from the professional judgments of the interviewed clinic staff. The team was impressed by their competence and dedication and considers their input a valuable contribution to the report.

Nutritional Status of Participants

Under the instructions from Catholic Relief Services in Ghana there was no screening process for children in rural areas. All children between the ages of five months and five years who come to participating clinics were eligible for the program. This is based on the assumption that clinics are held in areas where health statistics have demonstrated a substantial nutritional risk and, therefore, individual screening is not necessary. In the urban clinics, the staff suggested that recipients might be selected according to some definition of nutritional risk such as tuberculosis, post-measles, chest infections, malnutrition, and undernutrition.

In practice, because of the lack of formal, standardized criteria for program participation, the nutritional status of enrollees differed considerably from clinic to clinic and even within centers. The weight data collected and reported by CRS in their growth surveillance study in Ghana (19) showed noticeable regional differences in the distribution of children within the weight for age percentiles. Clinics visited in certain regions contained much higher percentages of children within the high risk categories. Even within a region or a program, the nutritional status of children deteriorates rapidly if they are exposed to measles or tuberculosis, or if drought or other economic factors affect the food supply available to the community as a whole. Finally, as discussed earlier, there are certain ages at which all children are more vulnerable to malnutrition. At about 6 to 7 months, when the breast milk is no longer sufficient to meet all the nutrient and energy needs of the child, and from 1½ to 3 years, when the child is being weaned, are the most critical periods.

Given these variations in nutritional status of recipients, as well as the possibility for rapid deterioration at any time, it is difficult to discuss nutritional impact based on group data. Each individual participant comes into the program at a different level of health, which neither remains static nor automatically improves with program participation. Grouping participants into categories of nutritional status helps in the analysis, but it is still necessary to follow each individual within the group over time.

Services and Impact

Because the food was distributed in conjunction with well baby clinics and hospital malnutrition wards, participation in the Title II MCH program in Ghana involved more than just food. Although amounts differed among programs, most MCH recipients were exposed to the following types of inputs: food and supplements (including Title II rations, milk products, vitamin and mineral supplements); medical and health care (physical examinations, vaccinations, general medical care); and health and nutrition education directed at mothers.

The direct impact of the Title II program in Ghana would be expected to be most closely related to actual consumption of the commodities. Thus, as children in the program increase their protein and calorie consumption through the foods provided, they should show a corresponding weight gain. However, in the programs visited in Ghana, there was little consistency in the amounts or types of commodities provided to participants from one month to another. Several factors affected the amount of food distributed to participants, namely:

The approved ration in the signed agreement with CRS: Although only one MCH/Child ration is stated in the AER, with the provision for doubling that ration in certain regions, in fact there were several different "standard" rations on file at the centers visited. Most programs were following the 2:2:1 (kilos/liters) of WSB:SFSG:Oil rations, but some were using 5:3:2 and others were using 3:2:1. At least one center was still distributing the commodities based on pounds, although the change to kilograms was made some time ago. Therefore, when sufficient food was available, centers were distributing different sized rations to supposedly comparable participants. (See Table 24.)

The availability of food for distribution: The major problem seen at the centers visited was the lack of consistency in receiving the program allocations of food. As was seen in Table 14 in Chapter IV of this report, only 7 of 22 centers had enough food on hand to provide single rations to their participants for two months. Program staff uniformly reported the need to curtail food distribution at various times, either by decreasing the ration size, by distributing partial rations each month, or in a few places by stopping the food distribution entirely. At the same time, few if any programs maintained in-house records on participants to document the actual amount of food received by an individual child on a monthly basis. While these data could be gathered, by examining each mother's record card, it would be an extremely laborious process.

Specific commodities and supplements provided: As discussed earlier, many of the centers were also distributing milk and/or milk-based formulas from EEC countries. Most often, these were reserved for the malnutrition cases, but sometimes the dried skim milk was also given out in the regular MCH clinics. Further, some programs were able to provide multi-vitamin tablets or syrup to participants at certain times. These added inputs were available to some children but not to others, and their use had a definite impact on the nutritional status of recipients above that of the Title II rations.

Attendance of program participants: Under the distribution system established by CRS in Ghana, participants do not receive the food unless they are actually present at the site. For the MCH program the mother/child must also fully participate in the program (e.g., weighing, immunizations, nutrition education) before the mother receives the food. In Ghana there are seasonal

Table 24: Reported Authorized Rations for the Sample Distribution Centers*

| SFSG | WSB | Oil** | Center |
|---------|-------|-------|--------|
| (K) | (K) | (L) | |
| 4 | 4 | 2 | 4*** |
| 4 | 0 | 1 | 1 |
| 2 | 3 | 1 | 1 |
| 2 | 2 | 1 | 8 |
| 2 | 2 | 1 | 3 |
| 0 | 2 | 1 | 1 |
| 1 | 1 | 0.5 | 5 |
| 0 | 1 | 0.5 | 1 |
| | | | |
| (lbs) | (lbs) | (L) | |
| 5 | 5 | 1 | 1 |
| 5 | 6 | 0 | 1 |
| 4 | 4 | 1 | 2 |
| 3 | 5 | 1 | 2 |
| 3 | 3 | 1 | 4 |
| 2 | 2 | 1 | 3 |
| 1 | 0 | 0.5 | 2 |
| Unknown | | | |
| TOTAL | | | 47 |

- * Separated by program type when more than one was authorized.
- ** Stated in liters but quarts were generally used.
- *** Several others had received authorization letters for this double ration but had not yet received the food, so they were still issuing the old ration.

variations in program attendance; generally it drops during the planting season as mothers are involved with the crop and are less able to get to the clinics. Although the typical MCH clinic sees the child on a monthly basis, many of the malnutrition cases come in two to four times per month to receive both food and health care. In the nutrition rehabilitation centers and other live-in programs, recipients were exposed to the food on a daily basis (when available) and received continuous health care. Thus, the variance in attendance for individual participants is extreme.

Beyond the lack of consistency in food distribution, the major

difficulty in determining program impact related to the commodities was the impossibility of determining the actual consumption by recipients. Once the food is distributed, there is no guarantee that it is actually consumed by the intended recipient, i.e., the preschool child enrolled in the program. In fact, more than half the interviewed staff members and participants stated that the food was generally shared with the entire family unit. (See Table 25.) Both the traditional food preparation methods (one meal in one pot and no special, separate dishes for small children) and the culture that feeds men and older boys first, help to ensure that the food usually is used for the whole family.

Although the AER established rations for 31,000 mothers in the MCH category, none of the programs visited during the evaluation study was distributing rations to mothers as a normal part of program operations. In selected programs, mothers at extreme nutritional risk would receive foods at staff discretion, but this was decided on a case-by-case basis. As it was generally agreed that the Title II foods were used to augment the family diet, presumably mothers were also eating them. However, the primary focus of the Food for Peace program in Ghana at the centers visited was the preschool children.

Use of Existing Data

Given the extremely compressed time frame for conducting the field work in Ghana, it was not possible for the team to collect new data. Instead, it was necessary to rely on the data already collected by the program centers. There are inherent limitations to this methodology, related to the quality and quantity of the information available. Unless the team was at a general clinic site on the distribution or feeding day, it was usually not possible to gather complete program information, particularly the weight data and interviews with participants and staff. Many clinics did not keep in-house records on the individual children; some could not even afford the time or expense to keep copies of the master chart. On the other hand, the hospitals and malnutrition clinics had excellent records. As noted earlier, none of the school feeding or day nursery programs visited were implementing growth surveillance, although CRS staff reported that the supervisors are currently instituting it in selected sites.

The major drawback to using existing data is that there can be so much variation among sites in terms of the accuracy of the measurements. Weights were taken by all levels of staff who varied greatly in training and experience. The equipment used also varied widely - a hospital scale that remains on site can be maintained at a high degree of accuracy, while a small scale that is carried from one village clinic to another is difficult to calibrate. In many instances the pressures of the clinics were so great that staff were likely to make slight errors in

Table 25: Frequency of Participant and Staff Ratings on How the Families that Receive the Rations Use Them in the Area

| Ration Use | Participants (%) | Staff Members (%) |
|--------------------------------------|------------------|-------------------|
| a) Feed entire family: | | |
| Yes | 51.4 | 52.2 |
| No | 29.7 | 7.5 |
| Some | 8.1 | 10.4 |
| No answer/don't know | 10.8 | 29.9 |
| b) Feed only children: | | |
| Yes | 43.2 | 38.8 |
| No | 24.3 | 13.4 |
| Some | 2.7 | 17.9 |
| No answer/don't know | 29.7 | 29.9 |
| c) Feed Pregnant and Nursing Women | | |
| Yes | 0 | 7.5 |
| No | 51.4 | 16.4 |
| Some | 5.4 | 5.9 |
| No answer/ don't know | 43.2 | 70.1 |
| d) Feed only other members of family | | |
| Yes | 0 | 0 |
| No | 54.1 | 29.9 |
| Some | 0 | 1.4 |
| No answer/don't know | 45.9 | 68.7 |
| e) Sell ration and buy other food | | |
| Yes | 0 | 0 |
| No | 62.1 | 26.9 |
| Some | 0 | 14.9 |
| No answer/don't know | 37.9 | 58.2 |
| f) Sell ration and buy other things | | |
| Yes | 0 | 0 |
| No | 62.1 | 23.9 |
| Some | 0 | 10.4 |
| No answer/don't know | 37.9 | 65.7 |

measuring and/or recording weights. With preschool children, even a small error in weighing can change their diagnosis by moving them into another percentile category.

Many of the limitations to using the existing data were at least partially corrected by the amount of time spent in field visits by the evaluation teams. By sitting in on clinics and observing the measurement activities, the researchers were able to gauge the quality of the data submitted. It was also crucial to an understanding of the field conditions that affect food distribution programs; the process of the data collection was as important to the evaluation effort as the data themselves. Finally, the important contextual information, which in many ways affords the best measure of program impact, could not have been gathered without the extensive field work.

NUTRITIONAL IMPACT OF FOOD FOR PEACE IN GHANA*

It was neither possible nor desirable to evaluate the Title II program in Ghana as an isolated entity. A definite and positive impact on the nutritional status of recipients and their families was seen, but the amount of change solely attributable to the Food for Peace program cannot be quantified. In fact, much of the real impact of the program, which goes far beyond weight changes in children, also cannot be quantified.

Weight Changes

One of the major indices of improved nutritional status in preschool children is weight gain. Both the amount of weight gained over time and the relative position on the weight for age charts can be used to document probable program impact. In situations where the weight for age grids are not available, Jelliffe (73) developed guidelines for use in assessing the adequacy of weight gains. These guidelines, shown in Table 26, can be used.

Table 26: Inadequate Weight Gains during the First Two Years of Life

| Age (months) | Minimum Length of Observation (months) | Inadequate Weight Gain (pounds) |
|--------------|--|---------------------------------|
| 0-06 | 1 | ½ (226 g per month) |
| 7-12 | 2 | 2 (453 g per month) |
| 13-24 | 4 | 4 (453 g per month) |

* It must be pointed out that CRS does not view nutritional impact as a major reason for distributing the commodities (14). A later section will deal with contributions to the family income.

Both the Road to Health chart and the CRS master chart enable clinic staff to diagnose the nutritional status of the children through comparison with established norms on a percentile basis. The diagnoses are generally correlated with percentiles as follows:

| <u>Percentile</u> | <u>Diagnosis</u> |
|-------------------|------------------------------|
| 80 - 100% | Normal |
| 60-79 | Underweight |
| 59 and below | Protein Calorie Malnutrition |

In addition, there were children seen in most programs who had been clinically diagnosed with either marasmus or kwashiorkor, but not all of those below the 60th percentile had been diagnosed.

During the field work, it was possible to collect serial weight data on 272 children with two measurements taken six months apart. These data are not necessarily representative of the program as a whole, nor are they necessarily representative of all the sites visited. As mentioned earlier, it was not possible to collect these kinds of data from many of the sites. The sample over-represents the hospitals and malnutrition clinics since the records were more complete in those institutions. However, while the findings may not be generalizable to the program as a whole, they do give strong indications concerning the impact of the program.

The weight gain data were analyzed according to two different groupings which were expected to have some effect on the result: namely, percentile nutritional diagnosis and age categories (in months) of the children at the first measurement. The results are significant not only in themselves but also because they reflect some aspects of the actual program operations of Food for Peace in Ghana discussed earlier.

Much of the raw data collected by clinics and hospitals throughout Ghana could be incorporated into a system of nutritional surveillance that would provide data about nutritional impact. One such study is currently underway at a hospital. This longitudinal study will follow the growth curves of two groups of matched children from six months to five years of age. The control group consists of children in the "normal" category who are consuming local diets. The treatment group consists of infants below the 50th percentile who receive specified supplements on a regular basis. (See Table 27.)

From the first reported results, several interesting facts emerged. The mean weight gain of the "normal" group was well above that suggested by Jelliffe (73) as adequate. At the same time

Table 27: Six Months' Weight Gain of "Matched" Malnourished Children (Fed Standard WSB Ration Plus EEC Milk) and Normal Children (Fed Local Foods Only)*

| Percentile Category | Malnourished (WSB + EEC Milk) | | | Normal (Local Foods Only) | | |
|---------------------|-------------------------------|------------|--------------------|---------------------------|------------|--------------------|
| | N | % of group | mean gain in kilos | N | % of group | mean gain in kilos |
| 81 - 100 | 0 | 0 | 0 | 20 | 100 | 1.85 |
| 61 - 80 | 2 | 10 | 2.10 | 0 | 0 | 0 |
| 60/below | 18 | 90 | 1.94 | 0 | 0 | 0 |
| Total | 20 | 100 | 1.96 | 20 | 100 | 1.85 |

* *Interim data from ongoing five year study. All children were six months old at beginning of period and 12 months at the end. "Matching" included sex, birth weight, mother age, and mother weight.*

it is less than the weight gain achieved by the food supplemented, malnourished children. These data clearly indicate that the extra food, when fed to the children, does improve the growth rate. The slower rate of the normal children could also be attributed to the fact that they are closer to ideal weight and, therefore, do not go through the same catch up growth spurt as the malnourished children.

While the weight data tend to indicate program impact, the sample was so small that country-wide conclusions cannot be drawn. The weight gain information gathered for the study generally coincides with that presented by CRS (19) as well as the earlier nutrition studies conducted in Ghana (83, 84, 85). Further, as shown by this hospital study, it would be fairly easy and inexpensive to conduct similar studies throughout the country. Children attending MCH clinics could be matched and dietary data collected to determine the approximate amount of extra food they receive monthly.

Table 28 presents the weight gain data collected by the evaluation team by percentile and diagnosis categories which had two extremely important implications for the food distribution program. In the first place, it is obvious that nutritional intervention at this stage did have positive impact on growth. The long term effects of PCM on mental and physical development are not completely understood, but the length of exposure as well as the timing are important factors. Therefore, the weight gains seen in all categories are encouraging. Secondly, given

Table 28: Six Months' Weight Gains in Kilograms of Sample Children by Growth Surveillance Percentile and Diagnosed Kwashiorkor/Marasmus Categories*

| Percentile/ Diagnosis | No. of Children | Total Gain | Mean Gain |
|--------------------------|--------------------|---------------|--------------|
| 80 - 100+ | 132 | 209.6 | 1.58 |
| 60 - 79 | 94 | 154.3 | 1.64 |
| 59 and below | 15 | 26.0 | 1.73 |
| Kwashiorkor/ Marasmus | 31 | 60.4 | 2.20 |

**Most of these children were served through hospitals and malnutrition clinics since the records were more complete in those institutions.*

the ration problems discussed earlier, the data showing progressively greater mean weight gains for children in the worst nutritional condition probably reflect the fact that those with clinically diagnosed conditions received greater inputs. These included not only greater amounts of food and the additional milk products, but also closer monitoring by program staff. It seems reasonable to assume that the most deprived children would tend to gain the most weight. These data suggest that this is the case, but more extensive studies are needed to confirm them. Certainly the apparently greater weight gain of the clinical PCM cases could be used very effectively as part of the nutrition education associated with the Title II program.

The data were also analyzed by age groupings (in months) to determine if the weight gains or losses occurred during known periods of nutritional risk. Again the data are suggestive rather than conclusive, because the figures could be compared only with the weight gains of the small sample of unsupplemented children in the hospital study (Table 29/Graphic X). The greatest mean gains were seen among children below 6 months, which is the usual age for the most rapid growth. In a country such as Ghana, breast milk alone is generally sufficient to sustain that rapid growth rate the first 6 months of life. The gains continued to be high at three points associated with definite changes in the dietary pattern:

7-12 months: breast feeding and with the first introduction of solids;

19-24 months: the major time for completing weaning in many parts of the country;

37-48 months: the age when many children are consuming the regular family diet.

However, each of the high periods was followed by a period of the lowest weight gain. One possible explanation for the variations is that each of the high points reflected an age group for which the nutrition education associated with the food distribution had stressed the importance of providing supplemental foods. This is an area where further study with controlled populations would be very instructive, particularly as it may sometime become necessary to restrict the program to those at highest nutritional risk. If the age related differences could be traced to specific causal factors, it would then be possible to determine feeding priorities based on age.

Table 29: Six Months' Weight Gain in Kilograms of Sample Children by Age Categories in Months*

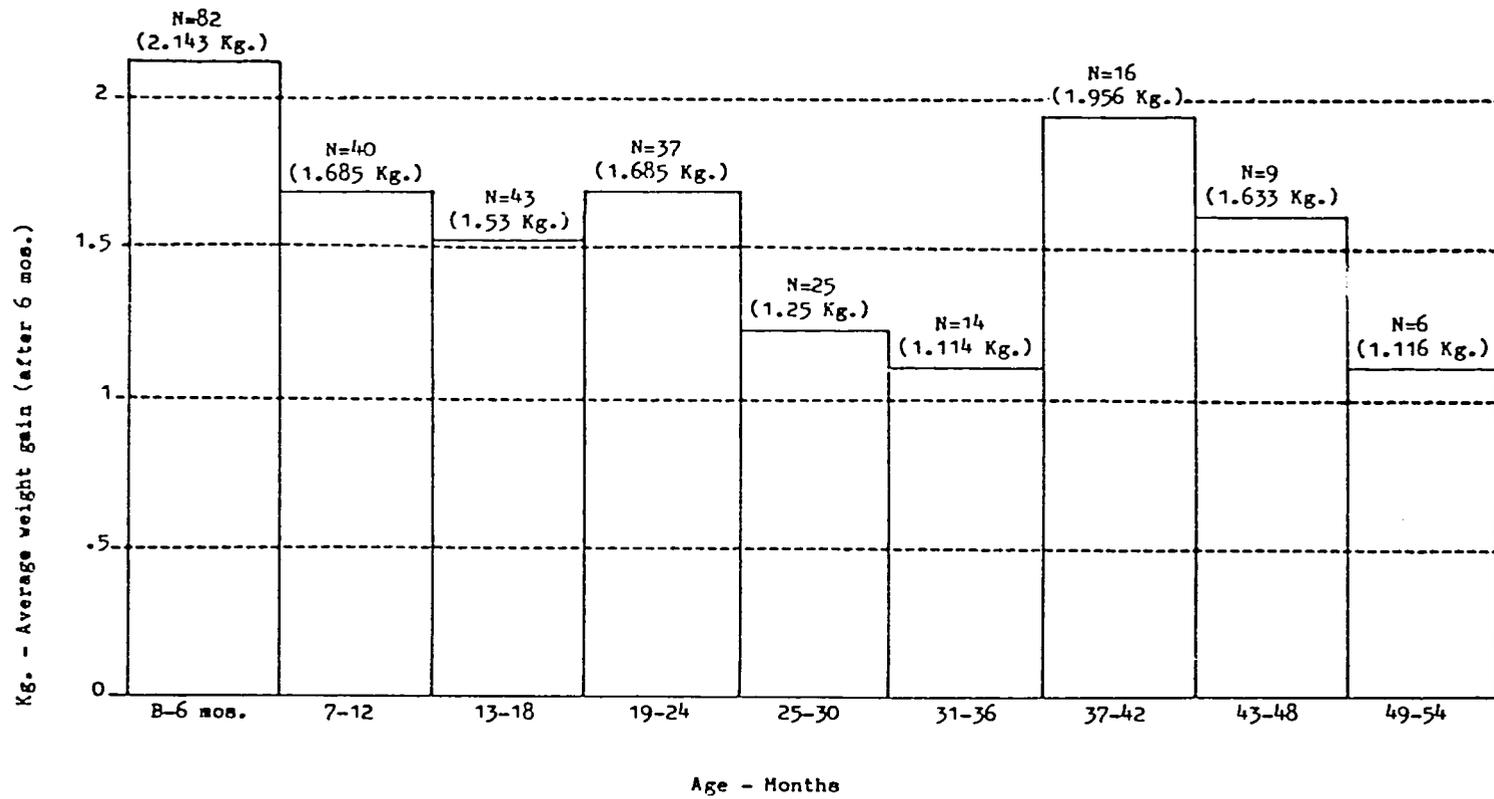
| Months | No. of Children | Total Gain | Mean Gain |
|--------------|-----------------|------------|-----------|
| Birth-6 | 82 | 175.8 | 2.14 |
| 7-12 | 40 | 67.4 | 1.69 |
| 13-18 | 43 | 49.6 | 1.15 |
| 19-24 | 37 | 62.4 | 1.69 |
| 25-30 | 25 | 31.5 | 1.25 |
| 31-36 | 14 | 15.6 | 1.11 |
| 37-42 | 16 | 31.3 | 1.96 |
| 43-48 | 9 | 14.7 | 1.63 |
| 49-54 | 6 | 6.7 | 1.12 |
| All Children | 272 | 455.0 | 1.67 |

*Most of these children were served through hospitals and malnutrition clinics since the records in those institutions were more complete.

The regional differences in agriculture and dietary patterns discussed previously are also reflected in most of the nutritional data collected in Ghana. In their report on the Growth Surveillance System in Ghana, Catholic Relief Services (19, p. 235) identified country wide trends in children's growth patterns. The regional ranking of master chart data, from the

Graphic X: Growth Surveillance Data by Age Group of Sample Children

Grand N = 272



worst to the best regions, was as follows:

| | |
|------------------------------|-----------------------------------|
| <u>below national norms:</u> | Upper Ashanti Northern |
| <u>nutritional mean:</u> | Brong Ahafo Western Central |
| <u>above national norms:</u> | Eastern Volta |

Classification of the available master chart data from the clinics visited during this evaluation effort (Table 28) show some striking differences when compared to the CRS data. These results were corroborated by personal observations, as well as through interviews with key persons in each of the regions visited. In addition, they represent only children seen at well baby clinics so that the sample would be more representative of the general population in the regions. Clinically diagnosed cases of marasmus and kwashiorkor were seen in all the regions visited, but this is a special population and should be treated as such. It was not possible to draw a statistically valid sample in any of the regions visited; the inclusion of selected malnutrition clinics would have biased the sample even further.

As can be seen in Table 30, analysis of the study data also defined the Upper Region as having the highest levels of weight

Table 30: Percentage of Children at Weight for Age Percentiles in Sample Well Baby Clinics* in Seven Regions of Ghana

| Wt. for Age Percentile | Volta Region (3)** | Eastern Region (1) | Central Region (2) | Western Region (3) | Upper Region (3) | Brong Ahafo Region (2) | Ashanti Region (2) |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------|---------------------------|-----------------------|
| 80-100 | 81.6 | 52.5 | 79.2 | 53.0 | 32.8 | 57.5 | 74.3 |
| 60-79 | 17.9 | 39.7 | 12.8 | 40.7 | 55.3 | 31.1 | 16.6 |
| Below 60 | 0.5 | 7.5 | 7.9 | 6.1 | 11.6 | 10.5 | 8.5 |
| Diagnosed PCM/Kwa. | 0 | 0.3 | 0.1 | 0.2 | 0.3 | 0.9 | 0.6 |

* Only 16 clinics had copies of a previous monthly report available; hospitalized children not included.

** Number of clinics for which records were available in the region.

retardation, and Volta Region as having the highest percentage of children in the "normal" category. In this analysis, however, Eastern joined Western and Brong Ahafo in the middle category, while Central was seen to approach Volta Region in the percentage of children in the normal category.

The major difference seen between CRS reports and this evaluation concerns the Ashanti Region. Sometime in 1980 CRS began to report that Ashanti Region was second only to Upper in the problems seen with retarded weight velocity. Based on the master chart data, the region was approved for double rations beginning with the 1981 AER. While absolute ratings were difficult, from the data presented in the CRS study of growth surveillance (19, p. 235), it appeared that the Ashanti Region had the third highest incidence of underweight children in the country.

Probably more important to the Ashanti data were the interviews conducted by the team with the regional and district medical and health authorities, with religious leaders, and with the managers of the several clinics. First, they were surprised that the Ashanti Region had been approved for double rations. They stated that they had not requested double rations. Second, they were of the unanimous opinion that Ashanti, as an entire region, does not need double rations. Each one quickly pointed out that some children in every clinic do, that the children in the malnutrition clinics and hospital wards also need the supplement. Additionally, they pointed out that some of the worst parts of the region (mostly northern and extreme eastern) were not now being served, or were served by only a few centers. It was their unanimous opinion that four additions to the present program would serve the region better than region wide double rations:

- 1 Flexibility in the centers to issue double rations to those most in need;
2. Flexibility to issue rations to some children beyond five years of age that are severely malnourished;
3. Flexibility to issue rations to some adults, especially mothers, who are severely malnourished and who are, in many cases, a part of the child malnourishment problem (notably lactating mothers with insufficient milk);
4. Extension of the program to some areas in dire need that are not now being served.

The evaluation does not mean to suggest that CRS intentionally provided incorrect information - indeed, the limited evaluation study could not sustain such a premise - rather, the team suggests that a more controlled, indepth study needs to be conducted. The CRS report (19), itself, lists some limitations to the data: vagaries of attendance, incomplete records for the

region, and over-representation of malnutrition clinics and hospitals. The overwhelming opinion of the professionals in the region, in conjunction with the small amount of data collected by the team, do suggest that shipments for double rations to the Ashanti Region be withheld until a further study of the conditions there demonstrates their merit and until those centers in the Upper Region, with so many underweight and malnourished children, receive enough commodities so they can issue double rations there.

Dietary Intake Data

It was not possible to collect baseline data on participant and family diets prior to their enrollment in the Title II program. For that reason, estimates of dietary changes were generally based on the judgment of professionals in the field. In addition, many mothers were able to describe how to make the local, protein fortified weaning foods. Although it was not possible to observe family meal preparation, at least the mothers' improved knowledge demonstrated a positive impact of the program.

During the study, 59 mothers were interviewed using the participant survey. This included both a 24 hour food recall and open ended questions on typical diets of various family members. Survey results generally reflected the regional dietary patterns reported earlier. In addition, the respondents described their use of the commodities in cooking:

- . WSB - used for koko (porridge);
- . SFSG - pounded and used as a flour or cooked like a grain for fufu and banku;
- . Oil - used in soups and stews.

It was easier to describe the program impact on food intake in relation to those children seen in malnutrition wards and nutritional rehabilitation centers. In most cases, the quantity and quality of food used could easily be determined as it was carefully controlled. Further, mothers or other family members were directly involved in the food preparation, which meant that cooking techniques were more likely to be carried back to the family setting. The emphasis on using potable water, proper cooking, and general cleanliness should have a considerable future impact.

Changes in Health Status

As many program staff reported that the food encouraged clinic attendance, one of the indirect impacts of the program was the probable improvement in participant health status. Although most of the programs visited did not maintain sophisticated

record keeping systems for documenting health changes in participants, program staff were able to provide many examples of such improvements. These ranged from specific instances of children whose lives were saved to more generalized discussions of improvements noted in a specific village or clinic group. Further, in response to a specific query regarding the impact of Food for Peace, 97% of program staff interviewed agreed that the program had resulted in improved health of participants. (Table 31) They also felt that without the program, their clinics would be serving many more sick and malnourished children.

Table 31: Frequency of Participant and Staff Ratings on Statement that the Food for Peace Rations Have Helped the Health of Participants

| Rating | Participants (%) | Staff Members (%) |
|----------------------------|------------------|-------------------|
| Completely agree | 48.6 | 76.1 |
| Agree | 40.5 | 20.9 |
| Neither agree nor disagree | 2.7 | 1.5 |
| Disagree | 2.7 | 0 |
| Completely disagree | 0 | 0 |
| No answer/don't know | 5.4 | 1.5 |

One of the major aims of nutrition education in Ghana has been to demonstrate to mothers the connection between improved infant feeding practices and the health and growth of their children. In certain instances this demonstration was quite graphic - most notably in the malnutrition wards and nutritional rehabilitation centers. In one village where children received supplemental WSB during a measles epidemic, the mortality rate was only 2 out of 140 cases as compared to an expected 20%. This was attributed to the WSB by the public health nurses, and they stated that now the villagers respect WSB as an important food for the strength and health of their children. During interviews, the participants also reflected this positive attitude toward the foods. As shown in Table 31, eighty-nine percent of those interviewed agreed that the foods in the ration package had helped improve the health of their children. They also commented that their children looked healthier and that they were less likely to get sick.

While the data to support the nutritional impact of the Food for Peace program in Ghana are not conclusive, they do indicate some positive benefits from program participation. Children did gain weight, even if all of it could not be attributed to the Title II rations. Dietary patterns were reportedly changed, particularly with the improvement of the traditional weaning foods. Although the impact was not measured, the nutrition education activities were well conducted and could have important future effects. Not only was a gradual shift to better infant feeding practices reported, but the potential carryover into the family could be at least as important in the long run as the nutritional rehabilitation of selected children.

ECONOMIC IMPACT

Catholic Relief Services has emphasized the economic impact of the Title II program in recent years. In a paper issued from the African office (24), designed to broaden the scope of Food for Peace evaluations, the economic implications for the nation and for the family were stressed. In the comments on the Upper Volta evaluation (17), CRS criticized the lack of attention to these two elements. The national significance of the value of the commodities has been described in many articles about PL 480, especially the 1977 history in *The New York Times Magazine* (94). Seldom have contributions to the family income been explored.

Impact on Ghana's Economy

The direct monetary value of the Ghana Food for Peace Title II commodities was set at \$4,900,000 for each of fiscal years 1980 and 1981. That sum was estimated to account for about 21% of all the humanitarian and relief assistance available to Ghana in 1980. Foreign aid in this category was considered to be about 5% of the total national income for that year; thus Title II loomed relatively large in the economy.

Many indirect employment benefits were also derived from the provision of these commodities: workers unloading the ships and loading the trucks, the warehouse work, loading the center destined trucks, and the income earned by the truckers in the transportation. While no total figure was available for these wages, the Government of Ghana paid nearly one million cedis (about US \$364,000 at the official exchange rate) for transportation alone.

Another economic view of the effects of the commodities can be inferred from the probable additional inflation that greater shortages would have caused. The 5300 metric tons of food substantially increased the total supply available, no doubt decreasing the rise in prices to some degree, and thus an anti-inflationary measure. Since the inflation rate was unofficially

estimated to be at least 100%, any alleviation is a great deal of assistance. Further, since many of the recipients were on low wages or fixed salaries, the reduction of inflation through the nearly free provision of the rations was of special impact on their lives.

The total economic impact on Ghana could not be calculated, but the effects of the Food for Peace Title II commodity value and the indirectly engendered contributions to the nation were substantial. The combination had a beneficial financial impact.

Family Income Effects

The Title II commodities have an affixed US dollar value. That amount, however, because of two exchange rates and the differing delivery costs, is problematic as a calculation of their value to the recipients. Since they were available in the markets of some towns and villages in southern Ghana, the market quotation is probably a better measure. The prices varied according to the supply, approximately in converse relation to the distance from the port of Takoradi. The Wheat Soy Blend ranged from ¢5 to ¢8 per pound with a median of ¢6. Soy Fortified Sorghum Grits were always priced lower; the median for a pound was ¢4. The soy oil was a very valuable product, with a median price of ¢28 per liter or quart (some came from the Food for Peace supplies but most from the World Food Programme distributions; thefts at the port accounted for a very high proportion of all the Food for Peace commodities offered for sale). (See Table 3 in an earlier chapter.)

A family that received one full ration would have received the equivalent of the following amounts per month:

| | | |
|-------------|---------------|-----------------|
| WSB | 2k = 4.4 lbs. | = ¢26.40 |
| SFSG | 2k = 4.4 lbs. | = ¢17.60 |
| Oil | 1qt | = <u>¢28.00</u> |
| Total value | | = ¢72.00 |

If a minimum wage laborer worked the usual 21 days in a month, his income would be ¢252.00 (Table 2) and the single standard ration value, less the ¢1 service charge, would raise the total to ¢323, a rise of 28%, no small addition. If he had two eligible children that received standard rations, the augmented income would total ¢395. The incomes for any of the wage earners would be increased by ¢71 per month, although those in the higher ranges would experience a smaller percentage increase.

Most of the sample recipients did not receive a full standard ration per month due to the supply shortages and the differing "standard" rations. A half ration, fairly common in the Upper

Region, would be somewhat more than half the previously calculated value since the prices for all foodstuffs were higher in that part of the country (no FFP commodities were found for sale in the markets in Upper Region so no exact value can be assigned).

The anti-inflationary effects of the commodities, mentioned in an earlier context, were estimated to be of very great impact on family income, especially those earning at or near the minimum wage. Since the minimum wage and the fixed salaries have not changed for some time, any amount of inflation simply reduces their purchasing power. Whatever the influence on inflation, then, the alleviation brought about by the presence of the Food for Peace commodities was a substantial boon to such families.

Potential Disincentives

The USAID Mission is required to file a report on possible disincentive effects of the Food for Peace products, including Title II. Obviously, a monetary figure is difficult to calculate. The latest examined documents (114, 115) narratively summarized the effects of the total US aid package in the following paraphrased terms:

There are disincentive effects on agricultural production in Ghana but they stem primarily from non-aid sources: difficulty in obtaining equipment, maintaining it due to the lack of spare parts and the shortage of fuel; deterioration of roads and transport vehicles, causing costs to rise and profit margins to decrease; the scarcity of fertilizers and seeds causing their prices to rise and their unavailability to have a depressant effect on production.

Insofar as the US and other aid to Ghana's agriculture is concerned, those elements that alleviate these problems, such as assisting them with equipment, spare parts, fertilizers, seeds and loans, result in an incentive rather than a disincentive influence. Any assistance that helps production increase either reduces the costs of production or raises production so that profit margins are higher.

The evaluators, then, would conclude that the technical assistance parts of the aid from the United States had an incentive effect since they were aimed at making agricultural production components more available, or more easily so, and because they had the potential effect of increasing the amount of production and thereby increasing the margin of profit. (70)

Some effects of the Title I foodstuffs on the total economy were

outlined previously. Since they, together with those from Title II, raised the total supply in the country, they were purported to have had an anti-inflationary effect. If no assistance had been given to agricultural production, the decrease in the market value of the locally grown crops could have had a disincentive effect. That is, if the resulting market prices were below the operating costs of the farmers, or the remaining margin of profit were too low for the effort expended, then some farmers would have chosen not to produce or to produce in lower quantities or with less investment in the production. Less grain on the market could have resulted in higher prices.

The in-country markets, however, are not the only ones that are important to Ghanaian farmers. The three hard currency nations bordering Ghana - Ivory Coast, Togo, Upper Volta - also have to import some foodstuffs. Ghanaian farmers, because of their proximity to those countries, have some transportation cost advantage. An additional advantage to marketing in those countries was noted by many interviewed officials: the hard currency received for the products decreases less in value over time and is more acceptable in the world economy, allowing Ghanaian farmers to purchase more outside production components with the same amount of money. US technical assistance did improve agricultural production; the combined incentive effects from that help and the potential disincentive effects from holding down market prices in Ghana would work to some degree in compensation with each other. The official estimate was that the incentive effects were greater than those from the disincentives.

The effects on gardens and other subsistence production cannot be calculated because the amount of that production in any year is unknown. One agricultural official stated that "it accounts for at least 20% of the food consumed in Ghana and it might run as high as 35%." Even the lower figure is significant in a national economy. The real influence of the Food for Peace commodities is also unknown; nevertheless, several factors are involved. One of the most important is that a high proportion of the recipients did not have enough food - they were hungry. Thus, the combined food they could raise for themselves and the added Title II foodstuffs still did not bring their total consumption to what most nutritionists would consider adequate. For those people, it is unlikely that they would cease their subsistence production. Many recipients, however, were shown to be at about normal weight, indicating that their total food supply was at or near a satisfactory level. Many of them reported cultivating gardens and small plots, especially of corn, yams, tomatoes, okra, peppers, and onions. It would appear from the survey, then that the Title II foods had little effect on subsistence agriculture for either of the two groups of recipients.

There was an expressed concern among the interviewed professionals, however. Most discussed "twenty-two years of handouts"

as having a psychological effect of becoming accustomed to receiving the foods. Some alleged that "some recipients don't work as hard as they did because they know that that amount of food will be given to them." Again, with the very small contribution the rations made to a total family food supply, it was difficult for the evaluators to place credence in any substantial reduction in gardening and small plot farming. A relatively small farming effort could produce items for the market, even if they were not consumed by the farmer. Since almost all the interviewees complained about the amount they earned, it is doubtful that the small rations had a discouraging effect on their self help efforts.

Many of the professionals recalled when the CRS/USAID program contained many Food for Work projects. There was a decided opinion that those had a potential for more lasting good than did the "handouts." Improvement of farming land, increased home garden production, and the additions of small livestock and poultry to the family and community food supplies were cited. Further, they noted that "earning the foods" was psychologically superior to receiving them gratis. They noted that many community facilities needed improvement and that Food for Work could help with those and, at the same time, give the families a feeling of worth. The most frequently named need projects included: improvement of the water supply and making it potable (78% of the interviewees); installation and repair of latrines; repair of streets and roads; building or repairing clinics and schools; and repair of other community buildings. The evaluation team recognized the problems attendant to Food for Work projects: increased costs, assessment of impact, and greater frequency of commodity sales. The feeling for "earning your way" and producing lasting benefits to the community were so strong, however, that Food for Work merits greater attention.

DIFFERENTIAL EFFECTS CLAIMS

The 1972 evaluation (25) briefly discussed some feeling among some professionals and recipients that "Catholics receive most of the benefits from the commodities." That same opinion was voiced to the present evaluation team, especially in Accra. The team used two approaches to answer the question of differential effects. First, the interviewees were directly asked their opinions on the matter. Only a handful of professionals and no recipients felt that Catholics received more than did non-Catholics. They pointed out that in most centers the number of recipients is so large and they come from such a wide geographic area that it would be impossible to even know who professed what religion, much less discriminate among them. The observations of the clinic operations and the surveys of the recipients produced agreement with the professional opinion. One area of controversy raised during the interviews involved the schools. In two towns, it was pointed out that the Catholic affiliated schools

(actually, all schools are under the Ghana Education Service) received the Food for Peace commodities and the local authority schools (managed by district councils) did not. That same charge could be made against the Protestant affiliation schools as well; in some towns and cities they received the assistance while the local authority schools did not. Some discrimination appears to exist in certain localities. The managers of the church affiliated schools insisted that they received the commodities only because "they fought for them." A few local authority schools in the country do receive help, especially those in some isolated and dire need areas. Since most schools, of whatever affiliation, received only small amounts of the commodities, the real net effect of the discrimination would have to be judged small. That did not keep some local residents from resenting what they saw as discrimination.

The second approach to answering the question was the examination of the proportion of Catholic versus other church affiliated agencies. The Catholic number was greater than for any other single religion but was less than the aggregation of the others. A part of the differential resulted from the number of institutions maintained by the Catholic church and its dependencies, since there were more of them than of all the other religious groups combined. A second aspect of this examination was to determine the relative adequacy of the supplies to the institutions. Although Table 15 does not identify the centers by religious affiliation, the large number of centers with few supplies is evident. Examining them by sponsoring organization provided no clues to discrimination; some Catholic centers had supplies, some had few, and some had almost none. The same was true for the Protestant run centers. The Ministry of Health centers tended to be better supplied than the others but there were even some of them that had received too few commodities for the number of recipients. It was concluded, then, that if there were any discrimination evident in the supplies of commodities, that it possibly was in favor of the Ministry of Health centers rather than the Catholic ones.

IMPLICATIONS FROM THE PROGRAM IMPACTS

Although some malnutrition occurred in every part of Ghana, the Upper and Northern Regions and portions of Brong Ahafo, Ashanti, and Western Regions were the most severely affected. Much of the problem stemmed from lack of food, but some was considered to be due to the high starch, low protein content of the foods used. The combination of malnutrition and disease was especially detrimental to the health of many preschool children. The weaning aged children, 12 to 40 months, were particularly vulnerable to malnutrition; poor sanitary conditions and childhood diseases, together with the malnutrition, were responsible for a high proportion of the infant mortality. Ministry of Health statistics listed 31,000 children with clinically diagnosed

kwashiakor and marasmus; another 210,000 were judged at very high risk. Many school age children and adults were also diagnosed as severely malnourished.

The declared standard ration of the Food for Peace commodities in Ghana, if issued and consumed by the children, would result in a substantial nutritional contribution to their diets. The double rations, authorized for some areas of the nation, would further increase the impact. WSB, when used in the traditional weaning foods, and SFSG for older children were considered as worthwhile supplements to the local foods. Unfortunately, many children did not receive rations consistently. Further, in many homes, the foods were consumed by the entire family, reducing the potential impact on the children's diets. The Food for Peace commodities were well accepted by the populace and those with the standard rations considered them to be sufficient in quantity.

Recommendations

The present Food for Peace commodities (WSB, SFSG, and soy oil) should be continued as the Title II products; when the standard ration is issued, they furnish substantial nutrition to the diets when consumed by the children; they are well accepted in Ghana.

CRS and other organizations should continue to seek dried milk and other milk products from the European Economic Community and its member nations since they are nearly indispensable to the alleviation of severe malnutrition; should the EEC discontinue its donations, the United States should consider adding these products to the rations.

The use of the dried milk in sanitary hospital conditions and in cooked preparations in the home has caused little or no digestive problems in Ghana; the dried milk and related products should be continued.

The measurement of the nutritional impact of the Food for Peace products was hampered by differing quantities and qualities of data, by varying consumption patterns among families, and by the inputs of dried milk products into the diets. Similarly, the amount of the foods distributed varied widely among the centers due to differing authorized rations and the amount of the commodities delivered. The school feeding and day care centers actually did not weigh the children nor maintain health records.

The Title II foods are distributed in Ghana to any child under age 5 whose mother attends the MCH program with the eligible child and who completes the required processing. There is no selection process among those who appear at the centers. Consequently, many children receive rations who are at normal weight and have never been underweight. On the other hand,

there are many areas of Ghana that are not served by the CRS program and many malnourished who reside in those areas. No rations are distributed to mothers, to pregnant and lactating women, or to ill adults. Nor are all the malnourished now being served. The present US budgetary restrictions make it unlikely that every child in Ghana can be issued rations.

Recommendations:

A selection process should be designed and instituted so that only high nutritional risk recipients receive rations.

The children in the school feeding and day care centers should be weighed and the selection process applied to them also.

Severely malnourished adults, especially the critically ill and the pregnant and lactating mothers, should receive rations.

The evaluation team collected six month weight data on some of the MCH children. The clinically diagnosed cases of malnutrition and those in the 60th percentile bracket gained substantially; those who were near normal weights gained the least. Those data gave further evidence to support the recommendations for selecting the recipients.

Double rations had been authorized for the Upper, Northern, and Ashanti Regions although few of the centers had received enough commodities for the increase. All of the previous studies and the data collected during this evaluation supported the increase for the Upper Region. The Northern Region was not included in the samples studied and no judgment could be made about the programs there. In Ashanti the proportion of malnourished children was very low except in the hospitals and malnutrition wards. The professionals in that region were nearly unanimous that double rations were not needed.

Recommendation:

The authorization for double rations in the Ashanti Region should be reconsidered.

Center staff members throughout Ghana reported that there were some children and adults in their areas that needed double rations even though they seldom felt that double rations for all recipients were warranted. The team observed recipients that merited such consideration.

Recommendation:

Flexibility, within prescribed conditions and procedures,

should be granted to the center managers to issue double rations to individuals suffering from severe malnutrition.

There are severe transportation problems to some sections of Ghana. Too, many of the areas do not now have clinics and/or do not possess the prescribed storage rooms. Some combinations of assistance with government ministries, with USAID/Ghana, and with other organizations could construct the facilities needed. Many health and religious authorities stated that the communities themselves would contribute time and work toward the construction.

Recommendation:

CRS should explore means of extending the distribution of the commodities to especially needy areas through joint facilities construction with other organizations; Food for Work may be an incentive for such construction in some areas.

The Food for Peace Title II commodities had a positive impact on the food availability in Ghana in addition to alleviating the shortages of food. The value of the commodities and the salaries for the work engendered in distributing them were particularly important in this era of troubled economics in that nation. The contributions of the food to individual family incomes were very large for minimum salary workers and amounted to worthwhile increases for some controlled salary professionals.

Officials of the Government of Ghana, USAID/Ghana staff members, and the evaluation team judged the additions of the commodities to the economy to have no appreciable disincentive effects on the nation's agricultural production nor on family food production. Food shortages continued even with the commodities; the high market prices were a stimulus to increase production. Further, the agricultural production programs of USAID and other organizations had the potential to more permanently improve the economic conditions of the country.

No religious bias in the distribution system of the Food for Peace commodities could be discerned. Catholic, Protestant, and Moslem managed centers appeared to suffer about the same vagaries of the delivery of the foods. Centers operated by the Ministry of Health seemed to have fewer shortages, but even some of those centers had experienced insufficient commodities at some periods. Most schools and some day care centers were definitely served less efficiently than were the Maternal Child Health programs. No bias in favor of any particular sponsoring agency could be ascertained among the schools and day care centers.

In summary, the nutritional impact of the Food for Peace Title II commodities was very important for those children diagnosed

with kwashiorkor and marasmus, and for many of the children at the weaning age. Near normal weight children gained about what would be expected for that group. Selection of the recipients to include primarily those that are malnourished, including adults, and improving the port handling and dispatch of the foods so that centers receive enough to serve those needy clients will result in even greater nutritional impact. The evidence for that impact can be increased by assisting the centers to improve their record keeping. The Food for Peace commodities were also of great importance to the national economy and to the wellbeing of the families that received them. Any disincentive effects of the introduction of the commodities into the country were expected to be minimal due to the general shortages of food and because of the simultaneous programs to increase the agricultural production of the nation as a more long term benefit. The Food for Peace program was sorely needed in Ghana in 1981 and produced some degree of success in reaching its objectives. The recent efforts to improve certain aspects of the delivery system, if now extended to other problems that exist, can make the program a highly worthwhile assistance to the nation of Ghana and to the children that receive the food supplements.

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Appendix A

Materials on the CRS Government of Ghana Agreement

1. Program for the Signing Ceremony
2. Remarks by Minister of Finance and Economic Planning at Signing Ceremony
3. Agreement between the Government of Ghana and the Catholic Relief Services
4. Daily Graphic, September 19, 1980:
"¢105m Food for Ghana"
5. Diplomatic Privileges Open to the Catholic Relief Services

PROGRAMME FOR SIGNING CEREMONY OF THE AGREEMENT
BETWEEN THE GOVERNMENT OF GHANA AND THE
CATHOLIC RELIEF SERVICES (USCC) AT THE
CASTLE, OSU, ON 18TH SEPTEMBER, 1980

P R O G R A M M E

- 9:15 am - Invited Guests get seated in the Conference Room.
- 9:30 am - Arrival of the Hon. Dr. Amon Nikoi, Minister of Finance and Economic Planning.
- 9:35 am - Exchange of greetings.
- 9:40 am - A speech by the Director of the Catholic Relief Services followed by the signing of the Agreement.
- 9:45 am - The Hon. Dr. Amon Nikoi, Minister of Finance and Economic Planning replies to the speech.
- 9:50 am - Light refreshment.
- 10:00 am - Closing.

REMARKS BY DR. AMON NIKOI, MINISTER OF FINANCE AND
ECONOMIC PLANNING AT SIGNING OF AGREEMENT BETWEEN
GOVERNMENT OF GHANA AND CATHOLIC RELIEF SERVICES
(CRS) ON THURSDAY, 18th SEPTEMBER 1980

Distinguished Guests, Ladies and Gentlemen,

On behalf of the Government and people of Ghana and on my own behalf, I wish to welcome you to this short ceremony marking the official signing of Agreement between the Government of Ghana and the Catholic Relief Services (CRS).

It is for me, personally, a special pleasure to sign this agreement, because over the years I have followed with keen interest and appreciation the work of the Catholic Relief Services in this country.

For many people in the rural areas, the CRS is synonymous with selfless and devoted services to the less privileged in society and, as a voluntary non-governmental organization, the CRS contribution to the social progress of rural communities is considerable.

I note, in particular, the Maternal and Child Health/Nutrition Programme under which food and essential services are provided in some 218 health centres throughout the country.

Of great significance, too, is the food programme for children in day care centres, jointly organized with the Ministry of Social Welfare.

For the Government, this emphasis on providing adequately for children is commendable because it is our belief that, since the children of today are the leaders of tomorrow, no effort should be spared to provide for the basic needs.

It is, therefore, in recognition of these laudable efforts of the Catholic Relief Services that the Government is entering into this agreement to provide the necessary support for the work of the CRS.

In the past, large quantities of food and other items ordered by the CRS had not been properly utilized because of lack of coordination between CRS and the Government. Under this agreement, Government will provide the necessary logistic support to the CRS to enable it to carry out its work effectively.

I should like to emphasise that, in signing this agreement, Government is reasserting its belief in the principle of cooperation and interdependence among nations and international organizations.

The Government is fully committed to resuscitating our economy and we are confident that the measures we have adopted will lead us to progress and prosperity. The Government believes that the road to economic salvation lies, first, in our own ability to contribute meaningfully to our own development and, in addition, to our efforts seeking international assistance. We shall not abdicate our responsibilities in these matters.

Distinguished Guests, ladies and gentlemen, let me once again thank the Catholic Relief Services for its contribution to social progress in Ghana. I hope that with the signing of this agreement the way is going to be paved for even greater contributions.

Thank You.

AGREEMENT BETWEEN THE GOVERNMENT OF GHANA
AND THE CATHOLIC RELIEF SERVICES - U.S.C.C.

THIS AGREEMENT is made this 18th day of September 1980 between the GOVERNMENT OF THE REPUBLIC OF GHANA (hereinafter referred to as the ("GOVERNMENT")) and the CATHOLIC RELIEF SERVICES - USCC (hereinafter referred to as "CRS").

WHEREAS the CRS is an international Voluntary Agency holding CATEGORY II status with the United Nations;

WHEREAS the CRS desires to import and distribute in Ghana food commodities, pharmaceutical products, medical equipment, clothing, material and furnishing for educational use, equipment, vehicles and supplies for community development activities;

WHEREAS the CRS desires to procure and obtain these goods for distribution to certain category of beneficiaries in Ghana and desires to support locally initiated development and social assistance activities;

AND WHEREAS the Government realizes the importance of the CRS programme and the relief it will provide to the country:-

NOW THEREFORE in consideration of the mutual understanding herein contained, it is hereby AGREED as follows:-

1. The CRS for its part shall:-
 - 1.1. Continue to maintain an office in Ghana directed by an American Citizen or other Expatriate assisted by Senior Ghanaian Staff and/or other Expatriate staff who shall be responsible for the management of the total CRS programme;
 - 1.2. Obtain the above-mentioned goods outside the territory of Ghana, mainly but not exclusively from the United States of America and from the countries of the European Economic Community, and ship

them to the ports of Tema or Takoradi at no expense to the Government of Ghana;

- 1.3. Address the shipments of the above-mentioned goods to its director or representative residing in Ghana;
 - 1.4. Establish and supervise the distribution of the above-mentioned supplies to needy people without discrimination on ethnic, political or religious grounds;
 - 1.5. Locate the necessary financial support, in the United States of America or elsewhere for implementing social assistance and/or community development programmes; and
 - 1.6. Bring to the attention of the Government of Ghana any irregularities which may arise from the application of the present Agreement.
2. The GOVERNMENT for its part shall:-
- 2.1. Ensure that all costs of, discharge, handling, port charges, transport, insurance after discharge, and storage of the above-mentioned goods upon arrival at the port of entry be financed by the Government;
 - 2.2. Make provision in the Annual Budget of the country for financing 2.1 above;
 - 2.3. Absorb the tax duties and levies elements of any of the above-mentioned goods, imported by CRS to designated beneficiaries, from all taxes, titles and levies;
 - 2.4. Not prohibit CRS from the inspection of all operations throughout the country arising from the application of the present agreement, notably the inspection of ledgers, warehouse, distribution centers, and stock inventories, wherever they may be, in respect of goods and services provided by CRS;

- 2.5. Take the appropriate legal action in instances of theft, misuse or any other violations brought to the attention of the Government of Ghana by CRS;
- 2.6. Allow CRS to publicly recognize its various donors from the United States of America, the European Economic Community, and other countries friendly to Ghana;
- 2.7. Absorb all duties, levies and taxes on:-
 - 2.7.1. all equipment, vehicles, supplies and fuel imported or purchased from outside Ghana by CRS;
 - 2.7.2. all funds generated by mothers' fees, the sale of empty containers and/or any other such funds that accrue to CRS that are used exclusively for the support and expansion of the CRS assistance programme;
 - 2.7.3. the personal and household effects imported by the CRS expatriate personnel within six months after the execution of this Agreement;
- 2.8. Absorb the income tax element, if any, of the emoluments paid from external sources to the expatriate staff of CRS;
- 2.9. Grant entry and residence permit to five (5) assigned international staff;
- 2.10. Allow CRS to maintain bank accounts and to exchange American dollars and other foreign currencies into local currency at recognized local banks;
- 2.11. Allow CRS international staff the same privilege accorded to staff of other international agencies, including but not limited to personal duty free privileges, in that CRS is registered as an international voluntary agency holding Category II status with the United Nations.

3. It is mutually AGREED that:-
- 3.1. This Agreement shall have an initial term of ten (10) years from the effective date and thereafter may be renewed or extended as required by the parties.
- 3.2. The Agreement shall take effect on the date of signature by both parties.
- 3.3. To the degree that CRS determines its possible and practicable, vehicles and equipment imported by CRS for the programme shall be transferred to the Government at the expiration of this Agreement.
- 3.4. This Agreement may be modified or amended at any time as both parties may agree to.
- 3.5. This Agreement may be annulled by notice of ninety (90) days by one party to the other before the end of a current term. All such notices should be in the case of the Government to the Office of the President and in the case of CRS should be sent to the Programme. Director of the Catholic Relief Services - USCC, P.O. Box 6333, Accra-North, Ghana.

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FOR THE GOVERNMENT OF THE REPUBLIC
OF GHANA

.....
FOR CATHOLIC RELIEF SERVICES USCC

Daily
Graphic

50p. FRI., SEPT. 19, 1980. No. 9300

From Catholic Relief Services...

€105m FOOD FOR GHANA

By C. S. Buabeng

THE Catholic Relief Services (CRS) is to offer the country €105 million worth of food over the next five years.

Agreement to this effect was signed between the Government and the CRS in Accra yesterday. It is the first of its kind to be signed between a voluntary organization and the Government.

Dr Amon Nikoi, Finance and Economic Planning Minister, signed for the Government. Mr Palmari H. de Lucena, CRS Programme Director, signed for his organization.

Under the agreement, the CRS will supply Sorghum grits, vegetable oil, wheat gey blend and milk.

The food programme, which is the CRS's contribution to the Government's effort to combat malnutrition in the country, will benefit 247,000 Ghanaians, mostly in the rural areas every year.

Mr de Lucena disclosed that 218 health centres, health posts, clinics and mission hospitals would have the "highest priority" for food. Other beneficiaries would be children in the day care centres.

The children in primary schools would be provided with lunch.

He stated that



• Dr Amon Nikoi (second from left), exchanging files with Mr Palmari H. de Lucena after signing the agreement.

Sitting behind Dr Nikoi is Dr Nabila, Minister for Information and Presidential Affairs. — Picture by EYI-MENSAH.

...It's Over 5 Years

apart from the milk which would be brought in from the European Economic Community (EEC) other items would come from the United States Agency for

International Development.

In a brief statement, the director said the agreement was "a milestone" in the operations of CRS in the country

for the past 21 years.

Replying, Dr Amon Nikoi assured the CRS that the government would take steps to eliminate problems likely to frustrate the smooth

execution of the programme.

He commended the CRS for its commitment to the social programme in rural communities.

In case of reply the
number and date of the
letter should be stated

My Ref. No. SCR.TA/CRS/GH

Your Ref. No.



MINISTRY OF FOREIGN AFFAIRS

P.O. BOX 4153

ACCRA

10th December, 1980

Dear Sir,

DIPLOMATIC PRIVILEGES OPEN TO THE
CATHOLIC RELIEF SERVICES - U.S.C.C.

I refer to your letter dated 10th October 1980, regarding your assumption of duty in Ghana and the privileges open to your organization.

2. In accordance with the Agreement entered into between the Government of Ghana and the Catholic Relief Services - U.S.C.C., the five expatriate staff of your organization will enjoy "first arrival privileges" i.e. the same privileges accorded to the staff of other non-Governmental international organization in Ghana. In effect, such personnel will be granted facilities for the importation, free of customs duty and taxes of similar effect, whether accompanied or not and within six months of assumption of duty in Ghana, a reasonable quantity of personal and household effects, including one motor vehicle, but excluding spirituous liquors or tobacco, for their personal use or for the use of their families.
3. The period of six months is the period of grace granted for completion of transfer of household and/or personal effects and is not intended as a period during which a motor car or goods may be ordered after arrival in Ghana.
4. With regard to vehicles, whether owned by the staff or the Catholic Relief Services as an institution, it is to be noted that these will be licensed to bear ordinary registration number plates.
5. Goods imported for official use by the Catholic Relief Services will, of course, be released duty-free on application to the Ministry of Foreign Affairs and in accordance with relevant provisions of the Agreement.
6. I take this opportunity to assure you of my co-operation and assistance at all times.

Yours faithfully,

THE DIRECTOR
CATHOLIC RELIEF SERVICES - U.S.C.C.
GHANA PROGRAMME
P.O. BOX 633
A C C R A.

for: PRINCIPAL SECRETARY
(A.A. CATO)

Appendix B

Materials on Port Security

1. Ghanaian Times, May 29, 1981:
"Ports to Get Maximum Security"
2. CRS letter of June 4, 1981, to Minister of
Presidential Affairs
3. Minister of Interior letter of June 8, 1981,
to CRS
4. Ghanaian Times, Aug. 1, 1981: "We Want
Security, Or..."
5. Daily Graphic, Aug. 5, 1981: "Food Items
Stolen From Harbour"
6. Ghanaian Times, Aug. 5, 1981: "260 bags
sorghum grits impounded"
7. Ghanaian Times, Aug. 5, 1981: "Security
at T'di Port Tightened"

PORTS TO GET MAXIMUM SECURITY

**Parliament
 switches
 attention
 on agric,
 schools**

By J. Arhinful-Mensah
 and Nana Yaa Umame

PARLIAMENT yesterday adopted two urgent motions on education and agriculture.

The motion on education, moved by Dr S. A. Nanson (PPP, Dormaa) on Wednesday asked the House to call upon the Administration, as a matter of urgency, to review the educational system of the country in order to bring it in line with the needs and realities of our changing society.

It was supported by Mr. A. A. Abanyie (ACP, Cape Coast). The urgent motion on agriculture, which stood in the name of Mr. Abdulai Alhassan (PPP, Gushiegu), expressed concern about the shortage of farming inputs and implements and urged the Government to alleviate the situation immediately.

Winding up the debate, which started on Wednesday, Mr. Alhassan recommended that the Ministries of Agriculture and Industries should mount a two-year crash programme to identify local industries which could be used in the manufacture of agricultural inputs locally.

He said the Government on its part, should mount a programme to educate those in higher educational institutions on the prospects of agriculture and urged the banking institutions to reduce interest on loans granted to farmers.

Mr. C. K. Nana (PNP, Krobo), observed that the problem facing Ghana as an agricultural country was not one of shortage of farming inputs but rather lack of willingness on the part of the people to take up agriculture.

Mr. J. B. Yebo (UNC, Avenor) said the needs of the rural people could only be met when everything was done to accelerate the development of

Contd on Page 3 Col 3

BY KOJO SAM

The Government has assured masters of foreign vessels berthing in Ghana, and other users of the ports, including importers and exporters, that adequate measures are being taken to ensure maximum security and protection of lives and property.

As a first step, the numerical strength of the police at the ports, especially Tema Harbour, is being reinforced.

The Tema Regional Police Commander has been instructed to submit weekly reports to enable the Government to re-appraise the security situation in the harbour area.

Mr. K. Antwi-Nimo, Deputy Minister of Interior, disclosing this in an interview with the "Times" in Accra yesterday, said the Government had also requested the Ghana Ports Authority as a matter of urgency to repair the damaged perimeter fence of the harbour.

Mr. Antwi-Nimo, who is also the coordinator of the National Bulltenuka Committee (NBC), said the Government had made it obligatory for all importers to take delivery of their goods as soon as they arrived, to avoid possible pilfering.

The NBC, continued the Deputy Minister, had requested the Ghana Cargo Handling Company to carry out "visual identification" of its workers to differentiate them from unwanted elements at the harbour.

He said under the new measures, all unwanted persons, especially those found in the security zone, would be arrested and prosecuted "without any favouritism, whatsoever."

"The security measures taken by the Government will cut across all activities at the port and we will not spare any person, including security men, found to have been involved in any illegal deals," Mr. Antwi-Nimo emphasized.

He used the occasion to warn "all those engaged in criminal acts at the harbour to desist from their actions because the Government will deal drastically with any one caught in the net."

From the harbours, Mr.

Contd on Page 4 Col 4

Security at Tema Harbour

Contd from Page 1 Col 2

Harbour, piled up at the Tema Harbour.

At a press conference at Tema on Tuesday, some importers of foreign vessels who had berthed at the harbour threatened to boycott the Tema Port if security measures were not tightened to protect life and property there.

They intended to call the attention of the International Transport Federation (ITF) to set on the situation which they said, was getting out of hand.

Meanwhile he said adequate transport arrangements were being made to evacuate large quantities of imported items, especially fertilizers, and over 10,000 tonnes of sugar and

FACSIMILE

June 4, 1981

The Hon. Dr. John Nabila
Minister for Presidential Affairs
The Castle
Osu

Dear Dr. Nabila,

Following the resolutions of our May 29 meeting, I would like to take this opportunity to update you on problems connected with the offloading of PL480 Title II commodities at Takoradi Port.

The Del Monte berthed on Sunday, 31st May, and proceeded to offload its cargo of 46,000 bags (1045 tons) Sorghum Grits, plus 26,000 bags (455 tons) Wheat Soy Blend. My staff has been in attendance throughout this period, and I have just returned from a two-day visit.

Serious breaches of security, involving all facets of the discharging process, were encountered in Takoradi. Unauthorized persons were able to gain easy access to the port as well as the ship; pilferage was severe and damage to cargo extensive. Overall port losses were well above tolerable levels. Again, security personnel were unable to cope with the well-organized and sophisticated gangs of thieves operating at the port.

As with the previous vessel, the Del Sol, the Master of the Del Monte has filed a letter protesting port conditions, a copy of which is enclosed.

The continuation of our mutual effort to resolve these problems is crucial if the refusal of shipping lines to bring essential goods to Ghana is to be avoided.

Once again, I wish to express my appreciation for the Ghana Government's commitment to the smooth operation of the CRS program.

Sincerely,

Palmari H. de Lucena
Director

cc: The Minister of Internal Affairs
The Chairman, National Bottleneck Committee
Father H. Senco, National Catholic Secretariat

Copy reply the
and date of this
will be quoted.

No. SSK/INT/S-

53/181

No. _____



REPUBLIC OF GHANA

Ministry of Interior

P.O. Box M.42

Accra

June, 19 81

SECURITY AT TAKORADI HARBOUR

Thank you for your letter of 4th June, 1981. I was very much disturbed by the contents of the letter as well as that of the protest note. Both have been referred to the Inspector-General of Police for his comments.

2. I wish to inform you that the police were alerted in good time before the arrival of the ship. I would have the matter investigated and let you know the outcome.

3. Meanwhile, efforts are being made to intensify the security net work at Takoradi port.

MINISTER OF THE INTERIOR
(W.C. EKOW DANIELS)

MR. PALMARI H. DE LUCENA
CATHOLIC RELIEF SERVICES - U.S.C.C.
P.O. BOX 6333
ACCRA-NORTH.

'We Want Security, Or..'

THE Captains of two Liberian ships — M.V. Victoria and MV. Soroko — which are discharging goods at the Takoradi harbour have threatened to sail off if adequate security personnel are not provided to

check the rampant pilfering of food aid brought from America.

The threat was issued by Captain M. Kallergis of M.V. Victoria when the Deputy Western Regional Minister, Mr I. T. Ocran, officials of the American em-

bassy and the Catholic Relief Services visited the ships.

Captain Kallergis said since the ships berthed at the harbour a week ago, there has been rampant pilfering of the food aid such as Sorghum, "Tom Brown" and Milk Powder consigned to both Ghana and Angola. He disclosed that the Captains cannot

accept responsibility for any losses incurred through pilfering.

He warned that if the rate at which the items are being stolen continues, the ships would sail off to Angola.

Mr Ocran assured the Captains of adequate security. He announced that he had already ordered the immediate drafting of armed Policemen and military personnel to strengthen the security at the harbour and on board the ships.

Meanwhile, five persons whose names are being withheld, have been arrested by the security personnel at the harbour for loitering in the harbour without pass — GNA

Ghanaian Times
Aug. 1, 1981

Food Items Stolen From Harbour

From Kwame Pennu,
Takoradi

ABOUT 8,000 bags of Sorghum, gritz, wheat and soyblend, often referred to as "tom brown" brought in from United States of America (USA) under the USA Food Aid Programme, are reported to have been stolen from the Takoradi Harbour.

The figure formed part of a total consignment of 195,000 bags of food

items discharged by two Liberian vessels, M.V. Soroko and M.V. Victoria, which berthed at the harbour a fortnight ago.

Reliable source close to the harbour said the items might have been stolen through pilfering when being discharged.

The source said there was the likelihood that some of the items got missing at other ports.

The source appealed to the port authorities to ensure effective secu-

rity control over such food aid until they are collected by those for whom they are meant.

During the discharge of the items last week, the captains of the two vessels threatened to sail away if adequate security was not provided to check the pilfering of the items.

The captains issued the threat when Mr Ise Ocran, Deputy Western Regional Minister, officials of the American Embassy and the Catholic Relief Services, visited the harbour.

Daily Graphic
Aug. 5, 1981

260 bags sorghum grits impounded

From "Times" Reporter,
Sekondi.

THE police have impounded 260 bags of sorghum grits popularly called "atoko" meant for the Ashanti Region which were allegedly diverted to a private house here.

A quantity was consigned to the St. Edward's Maternity Clinic at Kyekyewere under the Catholic Relief Services Programme.

According to a police spokesman, the police, acting on a tip-off, found the consignment being off-loaded from a truck with registration number AK 5003 into the house at midnight last Sunday.

The spokesman said when the driver, Francis Arthur, was challenged, he produced two waybills dated May 4 and July 27 this year covering a total consignment of 250 bags for the clinic but during a check it was detected that 20 bags were missing.

The spokesman said that the driver who could not account for the missing quantity, told the police that he decided to off-load the consignment to the house for safe keeping because the truck had developed faulty brakes.

The truck has been impounded and the driver granted police bail pending further investigations into the case.

Security at T'di Port tightened

From Frank Otchere, Takoradi

NEW stringent security measures, aimed at curbing rampant stealing of imported goods at the Takoradi Harbour have been introduced.

To facilitate the implementation of the measures, the Ghana Ports Authority has been asked to seal off ten of the 18 entrances to the harbour, and reduce the number of persons who possess permanent harbour passes but have no specific functions to perform there.

Mr R. K. Kugblenu, Commissioner of Police (Services), told newsmen after a visit to the harbour last Tuesday to acquaint himself with the security situation there, that the Port Authority the Cargo Handling

Company and other agencies operating at the port, had also been asked to provide special uniforms for their security and other personnel to make identification easy.

Casual labourers of the Cargo Handling Company and stevedoring firms at the harbour will wear special arm bands.

Mr Kugblenu appealed to security agents at the port to cooperate with the police in making the harbour a safe place for both travellers and goods.

The Commissioner of Police deplored the poor condition of sheds at the harbour and called on the authorities concerned to pay attention to the regular maintenance of all facilities at the port.

Ghanaian Times
Aug. 5, 1981

Appendix C

Annual Estimate of Requirements

1. Fiscal Year 1980
2. Fiscal Year 1981

TITLE II, PL 480 COMMODITIES
ANNUAL ESTIMATE OF REQUIREMENTS — FY 19 80
(See reverse for instructions)

FORM APPROVED
O.M.B. NO. 24-00031

1. COUNTRY
GHANA
2. COOPERATING SPONSOR
CATHOLIC RELIEF SERVICES

| 1. RECIPIENT CATEGORIES | 3a. NUMBER FEEDINGS DAYS PER MO. | 4. NUMBER OF RECIPIENTS | 5. NUMBER MONTHS OPERATING | 6a. NUMBER DISTR. DATED PER YEAR | PROPOSED DISTRIBUTION | | | | | | | | | | | |
|---------------------------------|----------------------------------|-------------------------|----------------------------|----------------------------------|-----------------------|--------------|---------------------|-----------------------|--------------|---------------------|-----------------------|--------------|---------------------|--|--|--|
| | | | | | 8. SFSG | | | 9. WSB | | | 10. OIL | | | | | |
| | | | | | 7a. NUMBER RECIPIENTS | 7b. RATE KGS | 7c. (000) KILOGRAMS | 8a. NUMBER RECIPIENTS | 8b. RATE KGS | 8c. (000) KILOGRAMS | 9a. NUMBER RECIPIENTS | 9b. RATE KGS | 9c. (000) KILOGRAMS | | | |
| Meatmeal (20% Moisture Content) | 30 | 110,000 | 12 | 12 | 31,000 | 1.35 | 4,185.00 | 31,000 | 2.27 | 70,470.00 | | | | | | |
| Meatmeal (10% Moisture Content) | 30 | 145,000 | 12 | 12 | 145,000 | 1.35 | 1,947.50 | 145,000 | 2.27 | 3,281.50 | 145,000 | .45 | 65,250.00 | | | |
| Wheat (14% Moisture Content) | 25 | | | | | | | | | | | | | | | |
| Wheat (10% Moisture Content) | 25 | 110,000 | 12 | 12 | 11,000 | 2.27 | 249.74 | | | | 11,000 | .22 | 2,418.00 | | | |
| Wheat (8% Moisture Content) | 25 | | | | | | | | | | 65,000 | .22 | 14,300.00 | | | |
| Wheat (6% Moisture Content) | 25 | 68,000 | 9 | 9 | 68,000 | 2.27 | 1,539.24 | | | | | | | | | |
| Wheat (4% Moisture Content) | 25 | | | | | | | | | | | | | | | |
| Wheat (2% Moisture Content) | 25 | | | | | | | | | | | | | | | |
| Wheat (0% Moisture Content) | 25 | | | | | | | | | | | | | | | |
| Wheat (Total) | | 255,000 | | | 255,000 | | | 255,000 | | | 224,000 | | | | | |
| 1. TOTAL RECIPIENTS | | | | | | | | | | | | | | | | |
| 2. TOTAL REQUIREMENTS FOR FY 19 | | | | | | | 5040.80 | | | 5,611.44 | | | 946.68 | | | |

| ADJUSTED REQUIREMENTS FOR SHIPMENT (METRIC TONS) | 30,000 at 2.72 kgs SFSG | 30,000 at 4.54 kgs WSB | OIL | TOTAL |
|---|-------------------------|------------------------|---------|----------|
| Quantity ordered September 30, 1978 | 436.6 | 21.1 | 183.5 | 635.2 |
| Quantity received October 1 through February 28, 1979 | 2,343.4 | 2,040.0 | 286.0 | 4,669.4 |
| Quantity from Current Year Approval | 724.5 | 816.0 | 0 | 1,540.5 |
| Quantity from Current Year Approval | 1,418.9 | 1,224.0 | 286.0 | 2,928.9 |
| Quantity on hand February 28, 1979 | 452.5 | 292.0 | 40.4 | 1,284.9 |
| Quantity from Title II Program FY 1979 | 4,000.4 | 3,527.6 | 358.5 | 7,886.5 |
| Quantity from Title II Program FY 1978 | 5,352.8 | 4,413.6 | 583.2 | 10,349.6 |
| Quantity from Title II Program FY 1977 | 4,677.9 | 3,744.6 | 204.6 | 8,627.1 |
| Quantity from Title II Program FY 1976 | 875.0 | 625.0 | 150.6 | 1,650.6 |
| Quantity from Title II Program FY 1975 | 1,622.7 | 1,402.9 | 235.7 | 3,261.3 |
| Adjusted Total Requirements FY 19 80 | 5,213.5 | 6,339.3 | 1,032.8 | 12,585.6 |

| CLEARANCES | SIGNATURE | TITLE | DATE |
|--|--------------------------|----------------------------------|---------------|
| 1. Submitted by (Title and Organization) | <i>W. L. [Signature]</i> | Director | April 5, 1979 |
| 2. Recommended & Recommended by USA Dair Embassy | <i>[Signature]</i> | Director | April 6, 1979 |
| 3. Cooperating Sponsor Approval | H. J. Nugent | Ass't Director, Program & Supply | 5/14/79 |
| 4. USAID Washington Approval | <i>[Signature]</i> | Chief, Title II Division | July 25, 1979 |

RECEIVED
CATHOLIC RELIEF SERVICES

180

includes 43,300 children who will receive double rations of SFSG and WSB.

TITLE II, PL 480 COMMODITIES
ANNUAL ESTIMATE OF REQUIREMENTS - FY 1981
(See sources for instructions)

FORM APPROVED
O.M.B. NO. 24-R0051

1. COUNTRY
GHANA
2. COOPERATING SPONSOR
CATHOLIC RELIEF SERVICES-USCG

| 1. RECIPIENT CATEGORIES | 2. NUMBER FEEDINGS DAYS PER WC | 3. NUMBER OF RECIPIENTS | 4. NUMBER MONTHS OPERATING | 5. NUMBER DISTRIBUTED PER YEAR | 6. PROPOSED DISTRIBUTION | | | | | | | | | TOTAL (1000) KILOGRAMS | |
|---------------------------------|--------------------------------|-------------------------|----------------------------|--------------------------------|--------------------------|-------------|---------------------|--------------------------|--------------|----------------------|-----------------------|--------------|----------------------|------------------------|----------|
| | | | | | a. SORGHUM CRITS (SFSG) | | | b. WHEAT SOY BLEND (WSB) | | | c. SOYBEAN OIL | | | | |
| | | | | | 7. NUMBER RECIPIENTS | 8. RATE KGS | 9. (1000) KILOGRAMS | 10. NUMBER RECIPIENTS | 11. RATE KGS | 12. (1000) KILOGRAMS | 13. NUMBER RECIPIENTS | 14. RATE KGS | 15. (1000) KILOGRAMS | | |
| Maternal Child Health Center | 30 | 31000 | 12 | | 2 | 744 | | 2 | 744 | | | | | | 1488 |
| Maternal Child Health Clinic | 30 | 145000 | 12 | | 2 | 4519.2 | | 2 | 4519.2 | | 1 | 1740 | | | 10778.4 |
| Preschool Child Feeding | 25 | 11000 | 7 | | 2.3 | 227.7 | | | | | 0.23 | 22.77 | | | 250.47 |
| Other Child Feeding | 30 | | | | | | | | | | | | | | |
| Other Child Feeding | 25 | | | | | | | | | | | | | | |
| School Feeding | 20 | 68000 | 9 | | 2.3 | 1407.6 | | | | | 0.23 | 140.76 | | | 1548.36 |
| Food for Work Workers | 30 | 1500 | 12 | | 9.1 | 109.2 | | | | | | | | | 109.2 |
| Food for Work Dependents | 30 | 4000 | 12 | | 9.1 | 436.8 | | | | | | | | | 436.8 |
| Other | | | | | | | | | | | | | | | |
| 7. TOTAL RECIPIENTS | | 260000 | | | | | | | | | | | | | |
| 8. TOTAL REQUIREMENTS FOR FY 81 | | | | | | 7,444.5 | | | 5,263.2 | | 1903.53 | | | | 14,611.2 |

| ADJUSTED REQUIREMENTS FOR SHIPMENT (METRIC TONS) | | SFSG | WSB | OIL | TOTAL |
|--|--|---------|---------|----------|-----------|
| 9. Quantity on Hand September 30, 1979 | | 991.4 | 56.4 | 40.9 | |
| 10. Quantity Received October 1 through September 30 March 31, 1980 | | 3185.6 | 2751.9 | 543.4 | |
| 10a. From Prior Year Approval (according to B/L) | | 227.2 | 1165.0 | 285.3 | |
| 10b. From Current Year Approval | | 4958.4 | 1586.9 | 258.1 | |
| 11. Quantity on Hand September 30 March 31, 1980 | | 2106.7 | 1370.5 | 7.6 | |
| 12. Quantity Due or Rec'd for Current FY Program Area September 30 March 1980 | | 2053.2 | 2825.8 | 297.2 | |
| 13. Total Line 11 Plus Line 12 | | 4159.9 | 4196.3 | 304.8 | |
| 14. Projected On-Hand, March 1 through September 30, 1980 | | 4159.9 | 4196.3 | 304.8 | |
| 15. Estimated Inventory, September 30, 1980 | | - | - | - | |
| 16. Desired Operating Reserve 5% | | 372.2 | 263.0 | 95.0 | |
| 17. Adjusted Total Requirements FY 1981 | | 7,816.7 | 5,526.2 | 1,998.53 | 15,341.43 |

| CLEARANCES | SIGNATURE | TITLE | DATE |
|--|------------------------------|----------------------------------|---------------|
| 18. Submitted by (Field Representative): | <i>Michael E. Mc Donnell</i> | (Bot) PROGRAM DIRECTOR | 30 MAY, 1980 |
| 19. Reviewed and Recommended by US AID Representative : | <i>Julian S. Carter</i> | Mission Director, USAID/Ghana | 2 June, 1980 |
| 20. Cooperating Sponsor Approval: | <i>H. J. Nugent</i> | Asst. Director, Program & Supply | June 20, 1980 |
| 21. ISC/AID - Washington Approval: | <i>Legg A. Shue</i> | Chief, PDC/FFP/Title II | 10/9/80 |

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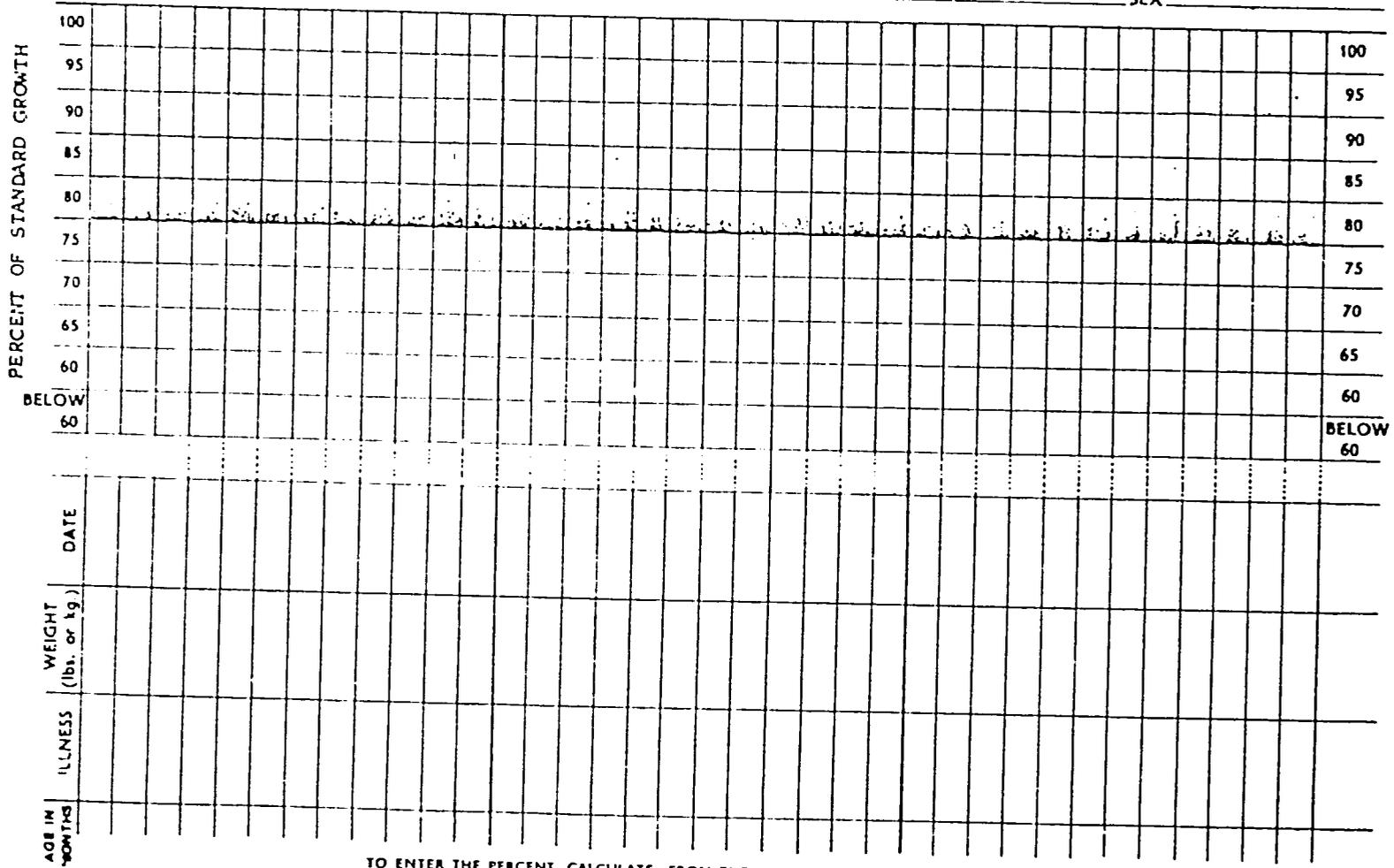
Appendix D

Growth Monitoring Forms

1. Growth Surveillance Chart (individual)*
2. Road to Health Chart (individual)
3. GSS Master Chart (pounds)*
4. GSS Master Chart (kilos)*

* Copyrighted forms;
permission to use must be formally sought and received.

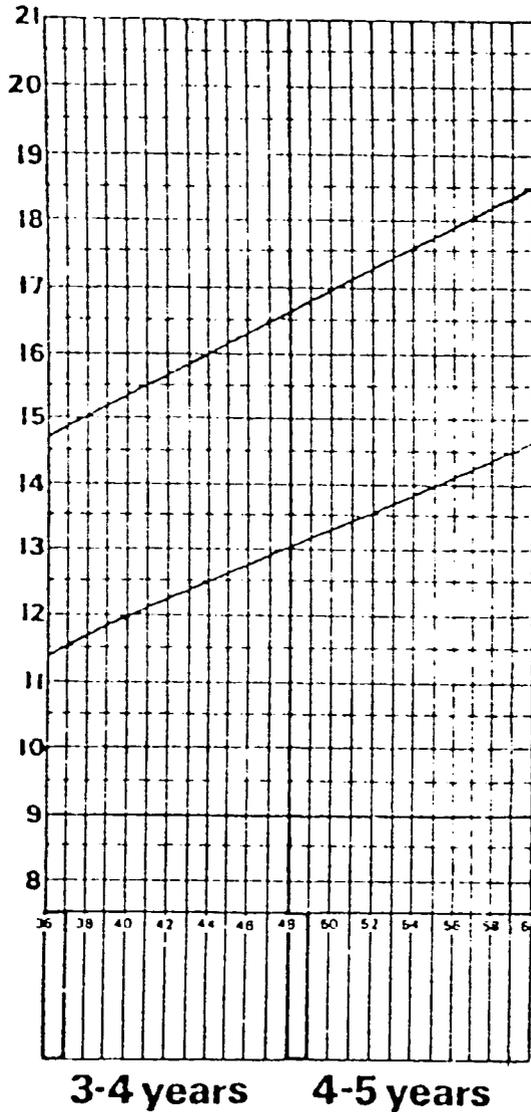
CENTRE _____ **GROWTH SURVEILLANCE CHART®** REFERENCE No. _____
 NAME _____ FATHER'S NAME _____ MOTHER'S NAME _____
 DATE OF BIRTH - KNOWN _____ PLACE OF RESIDENCE _____ GROUP _____
 ESTIMATED _____ DATE OF ENROLMENT _____ SEX _____



TO ENTER THE PERCENT, CALCULATE FROM THE MASTER CHART, FILL THE CORRECT SQUARE AND CONNECT THE DOTS AS SHOWN.



NOTES



Road to Health Chart

| | | | |
|--------------------------------|---------------|------------------|--|
| Clinic | | Child's no. | |
| Child's name | | | |
| | | Boy/Girl | |
| Mother's name | | Registration No. | |
| Gravida _____ | | Parity _____ | |
| Father's name | | Registration No. | |
| Date first seen | Date of birth | Birth Weight | |
| Where the family live: address | | | |
| BROTHERS AND SISTERS | | | |
| Year of birth | Boy/Girl | Remarks | |
| | | | |

| |
|---|
| ANTI-TUBERCULOSIS IMMUNISATION (BCG) |
| Date of BCG immunisation |
| |

| |
|-------------------------------|
| SMALLPOX IMMUNISATION |
| Date of immunisation |
| Date of scar inspection |
| Date of reimmunisation |

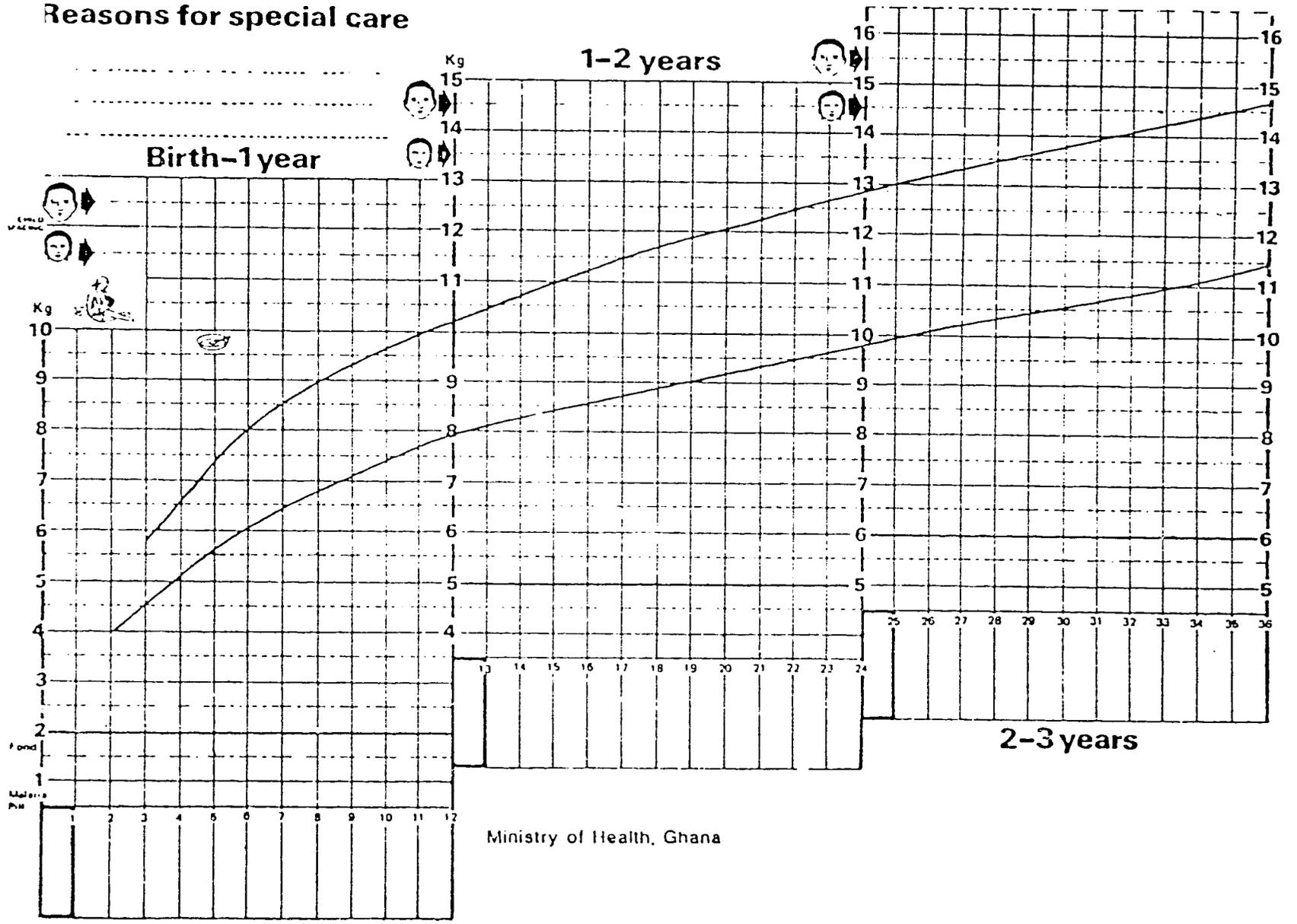
| |
|-----------------------------------|
| POLIOMYELITIS IMMUNISATION |
| Date of first immunisation |
| Date of second immunisation |
| Date of third immunisation |

| |
|---|
| WHOOPIING COUGH, TETANUS & DIPHTHERIA IMMUNISATION |
| Date of first immunisation |
| Date of second immunisation |
| Date of third immunisation |

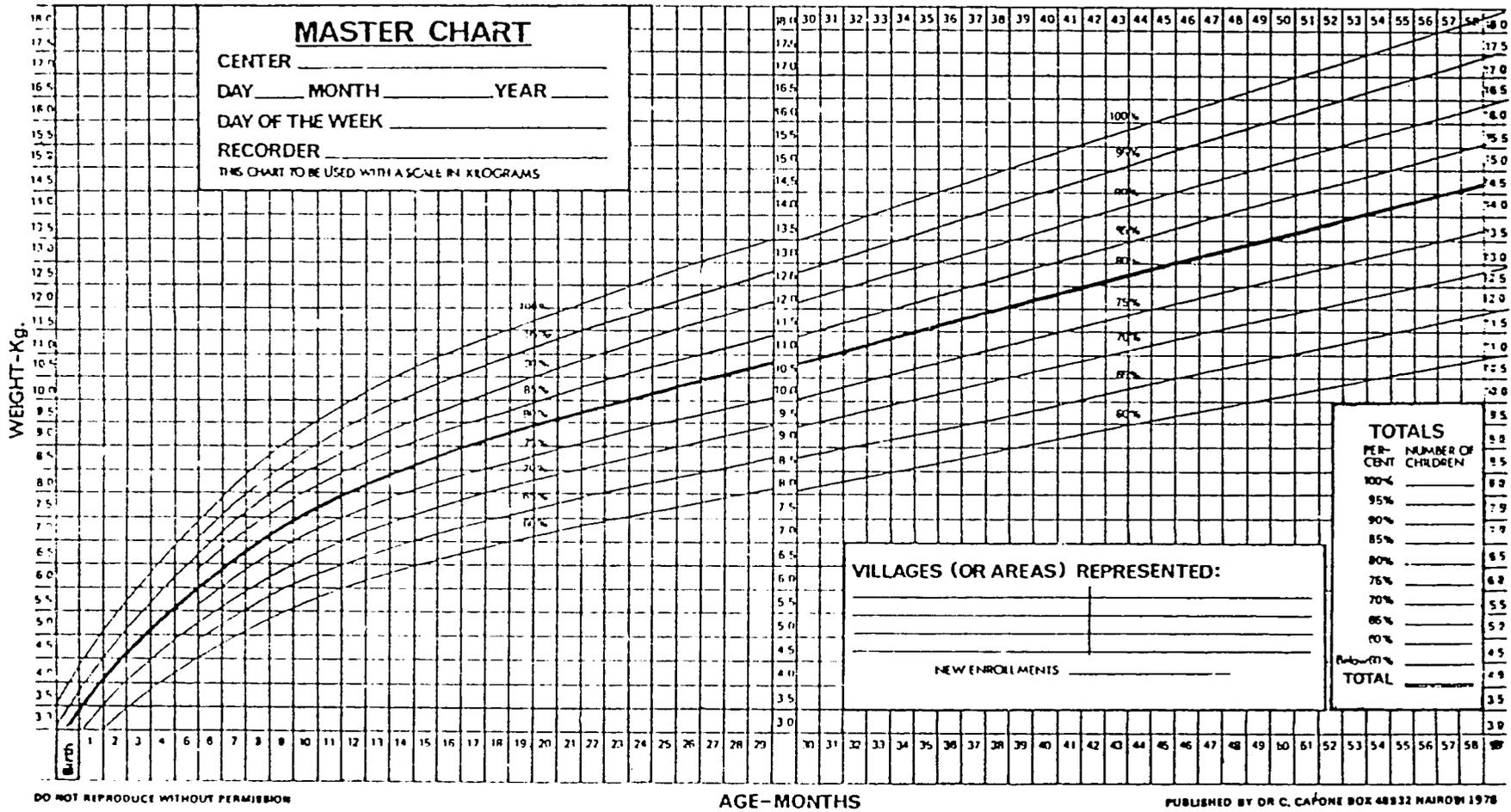
| |
|-----------------------------|
| MEASLES IMMUNISATION |
| Date of immunisation |
| |

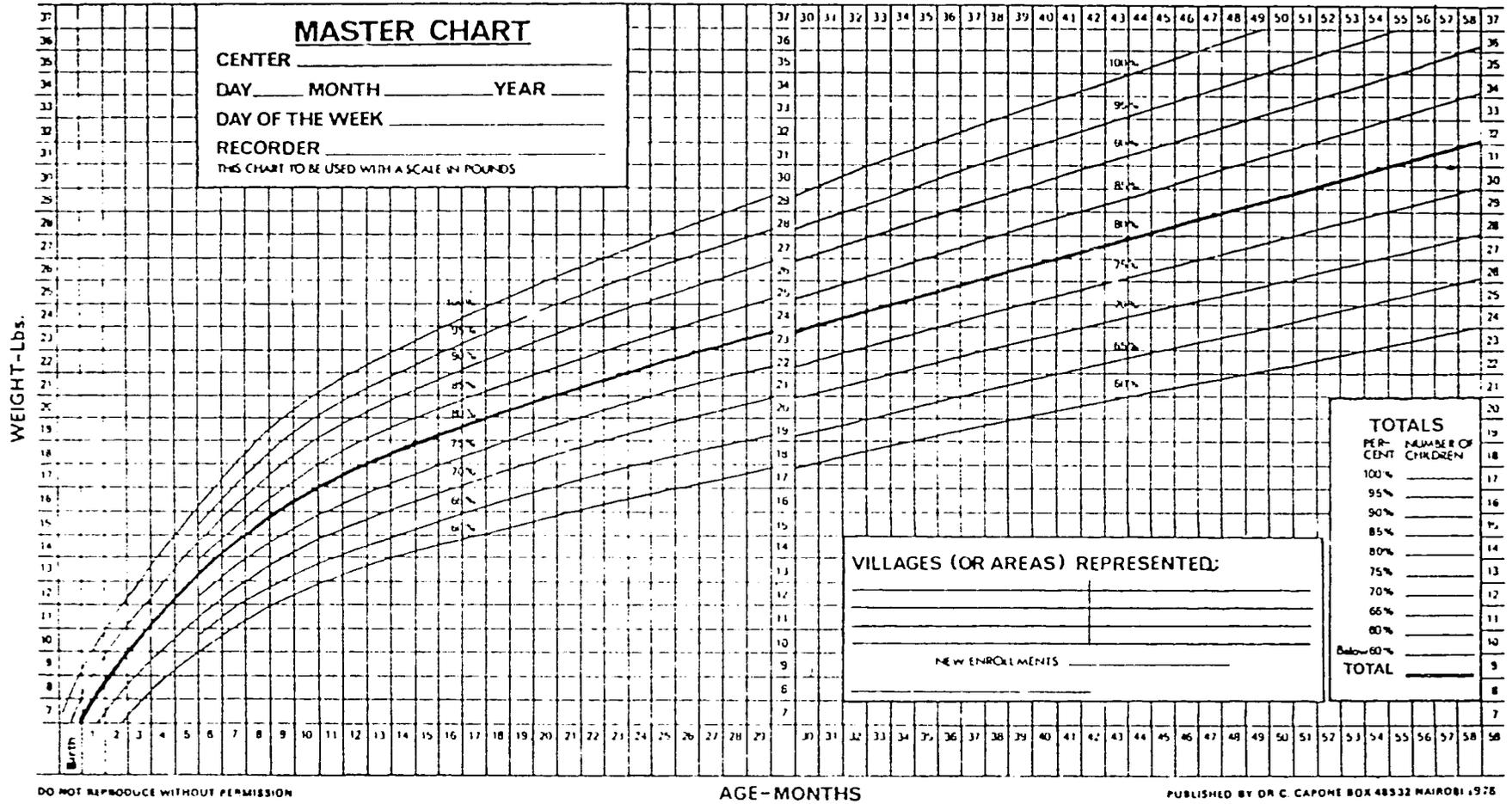
| |
|----------------------------|
| OTHER IMMUNISATIONS |
| |
| |

Reasons for special care



Ministry of Health, Ghana





Appendix E

CRS Forms and Documents

1. MCH Agreement Form
2. Food Program for Fiscal Year 1981 Agreement
3. Pre-School (monthly) Program Report
4. Food-for-Work Application
5. Food-for-Work Quarterly Reports Form
6. Pre-School Field Trip Report Form
7. School Lunch Program Form
8. End-Use Check Report Form
9. Inventory (monthly) Report Form
10. Tally Card
11. Daily Rations for School Lunch
12. Monthly Rations for School Lunch
13. Agenda for Eastern Region Seminar

AGREEMENT

CRS Program Application for FY _____

MATERNAL CHILD HEALTH

REGION _____

Name of Centre: _____

Address: _____

List all sub-centres (other places where clinics are held):

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

Type of Centre () Health Centre/Post _____, Hospital _____,
Clinic _____, Dispensary _____, Maternity Home _____,
Other _____

Number and type of staff running M.C.H. Clinics:

P.H.N. _____, C.H.N. _____, Midwife _____, Nurse _____,
Other _____

Title of person responsible for CRS food _____

Number of pregnant mothers seen monthly (approx) _____

Number of pre-school children seen monthly (approx) _____

What days are clinics held? _____

How often are clinics held? _____

Main foods grown in area _____

Main foods eaten in area _____

Are you prepared to run weekly clinics? Yes _____ No _____

Signature _____
Clinic Personnel

Title _____

Date _____

AGREEMENT

Region _____

Food Program for Fiscal Year 1981
(October 1, 1980 - September 30, 1981)

Catholic Relief Services (CRS) agrees to supply

Name of Center

Address of Center

with P/L 480 food during the 1981 fiscal year program and, in consideration of such supplies

Name of Center

Storage:

1. _____ to provide closed, clean, well-ventilated, rodent-proof storage for all such food sent to them and to place such food on platforms at least six inches off the floor.

Records:

2. _____ to maintain the following records and submit the following reports:-
- Records - (a) Tally cards (showing receipts, issues and running balances of food on hand).
- (b) Commodity Receipt Books (showing issues). This applies to main distribution centers only.
- Reports - (a) Receipts for food (to be submitted as soon as food is received along with STC waybills).
- (b) Monthly Inventory Report forms (where applicable) even when there is no food.
- (c) To sell empty containers at a price fixed by CRS and to submit proceeds to CRS.
- (d) Pre-school Monthly Reports forms (where applicable) even when there is no food.

Use:

3. _____
- (a) To distribute the food according to the application plan submitted to CRS.
- (b) To request prior approval from CRS before deviating from the application plan.

- (c) To appoint at least one person to supervise the distribution, record-keeping, storage and use of the food for all consumption centers receiving it.

Name and title of person appointed

- (d) To prohibit the sale, barter or exchange of the food at all distribution levels.
- (e) To maintain the donor identity of the food program.
- (f) To notify CRS of any deterioration or loss of food and to request handling instructions from CRS before taking any action.
- (g) To allow Ghanain government, donor government and CRS officials to inspect all storage points and pertinent records at any distribution level.
- (h) To reimburse CRS for any food lost or damaged through negligence or misuse in the event such loss is assessed against CRS by the donating government agency.

Name of Center

Name and title of person in charge

Signature of person in charge

Date

CRS Director's Signature

Date

CATHOLIC RELIEF SERVICES - USCC

P.O. Box 6333, Accra-North

Cable Address
Cathwel Accra

Telephone #
26183

PRE-SCHOOL PROGRAM REPORT for the month of: _____ 19____

Name of Clinic: _____

Address: _____
This report must be posted to CRS on the first day of each month.

FOOD
RECEIVED

| Commodity | Amount | Waybill Number | Date Received | Date Waybill sent to CRS |
|-----------|--------|-------------------|------------------|-----------------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

ATTENDANCE
AND FOOD
DISTRIBU-
TION

| Date | Location | New Regis- trations | Total Attendants | WSB | Sorghum | Oil | Milk |
|------|----------|------------------------|---------------------|-----|---------|-----|------|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

FINANCIAL
REPORT

Balance carried over from last month _____

Money collected this month for fees _____

Money collected this month for weight charts _____

(A) TOTAL INCOME ¢ _____

Money spent this month (please list):

1. _____ = _____

2. _____ = _____

3. _____ = _____

4. _____ = _____

5. _____ = _____

Postage and Commission: = _____

(B) TOTAL EXPENDITURE ¢ _____

(A) minus (B): _____

Amount remitted to
CRS _____

Balance on hand for next month _____

EMPTY
CONTAINER
SALES

Number of containers sold this month: Bags _____ tins _____
(at 50p per bag and £1.00 per tin)

Total income from empty container sales this month: _____
(All of this amount must be remitted to CRS)

REMARKS

Any requirements for next month, losses, special problems,
question:

Signature of Clinic Official

Name and Title

DEVELOPMENT ASSOCIATES, INC.

(Facsimile)

Catholic Relief Services
United States Catholic Conference
P.O. Box 6333, Accra-North, Ghana

Office Use Only

| | |
|----------|--|
| Approved | |
| Rejected | |

FOOD-FOR-WORK APPLICATION

I. Identifying Information

1. Name and mailing address of person, group, organization, institution, community, etc. applying for the food:
2. What does your group do?
3. Where is your project located (give town/village, district and region:

II. Description of Project and its Implementation:

4. What do you need for (specify targets and objectives of your project):
5. Who will take part in this project (give numbers)?
6. Who will be responsible for project (give numbers)?
7. How long will it take to complete the project (days, weeks, months, etc.)?
8. Give number of people and number of days in a week that they will work on the project:
9. Give estimated cost of project(s) including separate estimates of the cost of labour, materials, and tools (state if any of the categories is free):
10. Who owns the project?
11. Who are the beneficiaries and how will they benefit from the project?
12. Which inputs do you have on hand, and which must you buy in order to complete the project?
13. Attach implementation schedule (a step-by-step description of how the project will be implemented, including time frame; e.g. if it is a farming project: land clearing - February; planting - April; brushing - June; harvesting - September):
14. Have you received food-for-work from us before?
If yes:
 - i) In what year:
 - ii) What were you able to do with the food:

N.B: This application is subject to approval.

Catholic Relief Services
United States Catholic Conference
P.O. Box 6333, Accra-North, Ghana

PERIOD _____

FOOD-FOR-WORK QUARTERLY REPORTS

| PROJECT NO. | LOCATION | APPLICANT | PROJECT TARGETS | PROJECT STATUS | NO. OF WORKERS | TOTAL MAN DAYS | ESTIMATED COST OF PROJECT | FOOD DISTRIBUTED | COMMENT |
|-------------|----------|-----------|-----------------|----------------|----------------|----------------|---------------------------|------------------|---------|
| | | | | | | | | | |

CATHOLIC RELIEF SERVICES

P.O. Box 6333

ACCRA NORTH

Pre-School Field Trip
Report Form

Date: _____

Name of Centre: _____

Type of Centre: Health Center/Post, Maternity Home, Hospital, Mobile Centre

Person in Charge: Nurse, PHN, CHN, Midwife, any other

Clinic Days: _____

Frequency: Weekly, Alternate Weeks, Monthly.

CRS Scale: Yes/No Working? _____ In Balance? _____

Other Scale (type) _____

Register: Kept? _____ Up to date? _____

Total registration _____, Attendance marked? Yes ___ No ___

Total attendance on date of visit: _____

Total attendance last month: _____

Mothers counselled individually? _____

Lecture given? _____ Topic _____

Cooking demonstration: _____

Correct rations given? WSB _____, Sorghum _____, Oil _____, Milk _____

Stock on hand: WSB _____, Sorghum _____, Oil _____, Milk _____

Total food distributed last month: WSB _____ Sorghum _____, Oil _____
Milk _____

Does majority of mothers have weight charts? _____

Charts filled in correctly? _____

Charts used to teach the mothers? Yes ___ No ___

Individual child monthly fee: _____

Is there a food exhibit _____. Is it used to teach the mothers _____.

Number of charts examined: _____

Number above _____ below _____ the 80% standard.

Remarks: _____

Preschool Supervisor

SCHOOL LUNCH PROGRAM

Name of School _____

Number of Children on Roll _____

Main Distribution Center _____
(Sub-Center's collection point)

Quantities of food collected or delivered (from main distribution center)
during last four collections, including dates:

| | <u>Date</u> | <u>Sorghum (bags)</u> | <u>Oil (gallons)</u> | <u>Other (specify)</u> |
|----|-------------|-----------------------|----------------------|------------------------|
| 1. | | | | |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |

How is food stored? _____

Is food prepared on school site? Yes _____ No _____

How often? Three times per week or more? Yes _____ No _____

If less often, specify how often: _____

How much is cooked at a time: Sorghum (bags) _____ Oil (gallons) _____

What cooking facilities exist? Pots: Adequate _____ Inadequate _____

Water: How obtained? Standpipe _____ Borehole _____ Well _____ River _____
Other (specify) _____

Approximately how far from the school? _____

Is there a cook's shed? _____ Kitchen _____

Other facility (describe) _____

Any other utensils apart from pots? (list) _____

If food is not cooked at school what happens to the food after it is picked up? _____

If food is distributed among children, how much food per child and how often?

Do children pay canteen fees? Yes _____ No _____ If so, how much? _____

Do children make any other contributions toward lunch? Yes _____ No _____

If yes, specify: _____

Signature of Monitor

Date

END-USE CHECK REPORT FORM - DISTRIBUTION CENTRE

Identification number _____ Date _____

Name of Centre _____

Person preparing report _____

Person interviewed _____ Title _____

Total number of people _____ in _____ Sub-centres.

Number of recipients _____ in _____ Sub-centres as approved for.

Are storage facilities satisfactory? _____

Describe _____

Are any of the commodities deteriorated or infested? _____

Are records maintained accurately and currently? _____

Tally cards _____

Inventory records _____

Commodity Receipt Booklet _____

INVENTORY RECORD since the last field visit

| | Date | Oil | Sorghum |
|----------------------|-------|-------|---------|
| a) Stock at | _____ | _____ | _____ |
| b) Receipts | _____ | _____ | _____ |
| | _____ | _____ | _____ |
| | _____ | _____ | _____ |
| | _____ | _____ | _____ |
| | _____ | _____ | _____ |
| c) Total a + b | | _____ | _____ |
| d) Total distributed | | _____ | _____ |
| e) Balance | | _____ | _____ |

Has the money collected from the container sales been sent to CRS/Accra?

Comments

Signature of person interviewed

CATHOLIC RELIEF SERVICES

P.O. Box 6333, Accra North

Cable Address:

Cathwel Accra

Telephone

26183

INVENTORY REPORT for the month of _____ 19 _____

Name of Institution: _____

Address: _____

This report must be submitted to CRS on the first day of each month.

FOOD RECEIVED

| Commodity | Amount | Waybill Number | Date Received | Date Waybill Sent to CRS |
|-----------|--------|----------------|---------------|--------------------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

SUMMARY

1. Food at start of month
2. Received
3. Total avail. for dist. (1+2)
4. Distributed
5. Food at end of month (3-4)

| WSB | SORGHUM | OIL | MILK |
|-----|---------|-----|------|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

EMPTY CONTAINER SALES

| | | |
|---|---|---------|
| Balance from last month | | _____ |
| Sales this month (¢1.00/tin 50p/bag) | + | _____ |
| Minus cost of postage & commission | - | _____ |
| Total on Hand | = | ¢ _____ |
| Amount remitted to CRS | | ¢ _____ |

Name and title of official

Signature

REMARKS

DAILY RATIONS FOR SCHOOL LUNCH *

| <u>Number of Students</u> | <u>SORGHUM</u> | | | <u>OIL</u> | |
|-------------------------------|----------------|--------------|-------------|-------------------|------------------------------|
| | <u>lbs.</u> | <u>bowls</u> | <u>bags</u> | <u>fluid ozs.</u> | <u>fanta bottles (12 oz)</u> |
| 5 | 1 1/4 | 1/4 (apx) | | 2 | 1/6 |
| 6 | 1 1/2 | | | 2 2/5 | |
| 7 | 1 3/4 | | | 2 4/5 | |
| 8 | 2 | | | 3 1/5 | 1/4 |
| 9 | 2 1/4 | | | 5 3/5 | |
| 10 | 2 1/2 | 1/2 (apx) | | 4 | 1/3 |
| 20 | 5 | 1 | | 8 | 2/3 |
| 30 | 7 1/2 | 1 1/2 | | 12 | 1 |
| 40 | 10 | 2 | | 16 | 1 1/3 |
| 50 | 12 1/2 | 2 1/2 | | 20 | 1 2/3 |
| 100 | 25 | 5 | 1/2 | 40 | 3 1/3 |

*Source: Information provided to school feeding programs by CRS, Accra, Ghana.

MONTHLY RATIONS FOR SCHOOL LUNCH*

| <u>Number of Students</u> | <u>SORGHUM</u> | | | <u>OIL</u> | | |
|---------------------------|----------------|--------------|-------------|-------------------|----------------|-----------------------------|
| | <u>lbs.</u> | <u>bowls</u> | <u>bags</u> | <u>Fluid ozs.</u> | <u>Gallons</u> | <u>Fanta Bottle (12 oz)</u> |
| 1 | 5 | 1 (apx) | | 8 (apx) | | 2/3 (apx) |
| 2 | 10 | 2 | | 16 | | 1 1/3 |
| 3 | 15 | 3 | | 24 | | 2 |
| 4 | 20 | 4 | | 32 | 1/4 | 2 2/3 |
| 5 | 25 | 5 (apx) | 1/2 | 40 | | 3 1/3 |
| 6 | 30 | 6 | | 48 | 1/3 | 4 |
| 7 | 35 | 7 | | 56 | | 4 2/3 |
| 8 | 40 | 8 | | 64 | 1/2 | 5 1/3 |
| 9 | 45 | 9 | | 72 | | 6 |
| 10 | 50 | 10 (apx) | 1 | 80 | 2/3 | 6 2/3 |
| 20 | 100 | | 2 | 160 | 1 1/4 | 13 1/3 |
| 30 | 150 | | 3 | 240 | 2 | 20 |
| 40 | 200 | | 4 | 320 | 2 1/2 | 26 2/3 |
| 50 | 250 | | 5 | 400 | 3 | 33 1/3 |
| 100 | 500 | | 10 | 800 | 6 | 66 2/3 |

*Source: Information provided to school feeding programs by CRS, Accra, Ghana.

AGENDA FOR EASTERN REGION SEMINAR - 22nd May, 1981

| | | |
|------------------|---|--------------------------------|
| 8:15 am | Welcome Address | By Director/Assistant |
| 8:15 - 8:30 am | Opening of Seminar | By the R.M.O.H. |
| 8:35 - 9:35 am | Health & Nutrition Status of the Pre- School Child | By Miss Joana Addo |
| 9:40 - 10:40 am | Essentials of a Valid Food and Nutrition Program | By Mrs. Hannah Evans-Lutterodt |
| 10:40 - 11:00 am | MIDMORNING BREAK | |
| 11:00 - 12:30 pm | The Growth Surveillance System | By Mr. Francis Asamoah |
| 12:30 - 1:30 pm | LUNCH BREAK | |
| 1:30 - 2:30 pm | Micro Fund Project | By Mrs. Nancy Keteku |
| 2:30 - 3:00 pm | Recent changes in the program | By Mrs. Annie Bani |
| | a) New Rations b) Specials c) Elimination of under 5 months from the Master Chart. | |
| 3:00 - 4:00 pm | Problems from the Field | |

Appendix F

Evaluation Team Facilitation Documents
Government of Ghana

1. Ghana Education Service
2. Ministry of Finance & Economics Planning
3. Ministry of Health
4. Department of Social Welfare

GHANA EDUCATION SERVICE

HEADQUARTERS

In case of reply the number and date of this letter should be quoted



Ministry Branch Post Office

P. O. Box M 45

Accra, Ghana

My Ref. No. **EP-2482/II/135**

Your Ref. No.

REPUBLIC OF GHANA

... **26th May,** 19 **81**

PL.480 TITLE II (CATHOLIC RELIEF SERVICES) PROGRAMME EVALUATION

This is to inform you that there is a USAID team in the country to evaluate the above programme.

2. Members of the team will be visiting all regions to acquaint themselves with the operations of the programme.

3. As many school children all over the country benefit from the programme, members of the team would also visit some schools in the regions.

4. I should be grateful if all Regional Directors will give the team every assistance required in the performance of their work.


for: DIRECTOR-GENERAL
(G.K. BRESE)

FACSIMILE

INTERNATIONAL ECONOMIC RELATIONS
DIVISION
MINISTRY OF FINANCE & ECONOMIC
PLANNING
P.O. BOX M. 40
ACCRA

MEA/BAD/417.1

PL 480 TITLE (C.R.S.) PROGRAMME
EVALUATION

1. This is to inform you that the USAID team to evaluate the above Programme has arrived in the country and will be visiting the regions soon.
2. We would appreciate it if you could ask your Regional Directors to cooperate with the team in the evaluation.

for: PRINCIPAL SECRETARY'
(H/ MAAMAH)

THE DIRECTOR-GENERAL,
GHANA EDUCATION SERVICE,
MINISTRY OF EDUCATION,
A C C R A .

cc: The Principal Secretary
Ministry of Education
A c c r a .

The Food For Peace Offer
USAID
A c c r a .

In case of reply the
number and date of this
letter should be quoted.

My Ref. No. NMEA/EAD/417.1
Your Ref. No. _____



DEPUTY MINISTER
MINISTRY OF FINANCE AND ECONOMIC PLANNING

P.O. BOX M.40
ACCRA

21st
.....MAY,.....1981.....

Dear Sir,

REQUEST FOR SUPPLY OF PETROL FOR PL 480
TITLE II EVALUATION TEAM

PL 480 Title II Programme commodities are offered in the form of grants by the U.S. Government for emergency relief purposes and/or to combat malnutrition in developing countries.

The programme started in Ghana in 1958, and the food aid received up to the end of 1980 has been in the order of 57.6 million dollars. The programme for the 1981 - 82 financial year is estimated to be 6.4 million dollars.

Since the inception of the programme there has been no evaluation of its impact, and the U.S. Government has sent a team to conduct such an evaluation. The team will be in the Upper Region for about one week, and plan to visit programmes which receive assistance in Wa, Tumu, Navrongo, Bolgatanga and the surrounding areas. These will include Maternal and Child Health Centres, School Feeding projects and the School for the Blind at Wa.

I shall be grateful if you will give them every assistance, and especially help them to obtain petrol to enable them to carry out this all important evaluation.

Yours faithfully,

DR. E.L. NYAKOTEY
DEPUTY MINISTER OF FINANCE & ECONOMIC
PLANNING

THE HON. MR. GEORGE NANDZO,
REGIONAL MINISTER,
UPPER REGION,
BOLGATANGA.

*In case of reply the
number and date of this
letter should be quoted.*

My Ref. No. MIND/117/Vol.4

Your Ref. No. _____



REPUBLIC OF GHANA

(Nutrition Division),

Ministry of Health

P.O. Box M-78,

Accra.

21st May, 1981

All Regional Medical Officers
of Health

or

To Whom It May Concern

PL 480 Title II Evaluation Team

PL 480 Title II programme commodities are offered in the form of grants by the U.S. Government for emergency relief purposes and/or to combat malnutrition in developing countries.

The program started in Ghana in 1958 and is generally operated by the Catholic Relief Services (CRS). The food aid received up to the end of 1980 has been in the order of 57.6 million dollars. The programme for the 1981-82 financial year is estimated to be 6.4 million dollars.

Since the inception of the programme there has been no evaluation of its impact, and the U.S. Government has sent a team to conduct such an evaluation. The team will be travelling throughout Ghana for approximate three weeks visiting various centres which receive the PL 480 Title II commodities. These will include Maternal and Child Health Centres as well as School Feeding projects.

I shall be grateful if you will give them every assistance in providing whatever information they require pertaining to the PL 480 commodities which will enable them to carry out this all important evaluation.

A handwritten signature in black ink, appearing to read 'T. A. Duodu'.

for: DIRECTOR OF MEDICAL SERVICES
(DR. T. A. DUODU)

DEVELOPMENT ASSOCIATES, INC.

In case of reply the number and date of this letter should be quoted.

My Ref. No. M.335/Vol.3/5

Your Ref. No.



REPUBLIC OF GHANA

Department of Social Welfare

~~and Community Development~~

P.O. Box M.230

Accra

22 May, 61

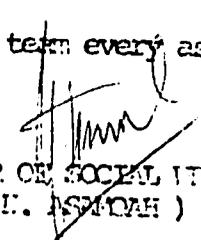
..... 19

EVALUATION OF FOOD AID PROGRAMMES

You are aware that the US Government provides food aid, under the PL 480 title II programme for emergency relief programmes and/or the prevention of malnutrition. In Ghana this is distributed by the Catholic Relief Services.

2. US AID has appointed an evaluation team to visit Ghana and assess the nutritional impact of these programmes. The team will be here for 4 weeks, and during this period expects to visit some Day Care Centres and Children's Homes in your region which benefit from the food aid programme.

3. This is, therefore, to request you to give the team every assistance to make their visit to your region rewarding.


DIRECTOR OF SOCIAL WELFARE
(J. H. ASPINAH)

TO ALL REGIONAL SOCIAL WELFARE OFFICERS.

Appendix G

Evaluation Interview Guides and Survey Forms

1. Field Site Questionnaire
2. Brief Site Questionnaire
3. Growth Surveillance Data Forms
4. Participant Survey
5. Opinionnaire
6. Market/Community Survey

Center code: _____

Date: _____

Location: _____

Interviewer: _____

Region: _____

Respondent type: _____

FIELD SITE QUESTIONNAIRE - PAGE 1

I. GENERAL INFORMATION

1. Food distribution site: _____

2. Program administered by: _____

3. Food Programs Offered: MCH ScF OCF FFW Other _____

4. Other services available at site:

5. Program Participation Data

| | JAN '81 | | FEB '81 | | MAR '81 | | APR '81 | |
|----------|---------|-----|---------|-----|---------|-----|---------|-----|
| | Reg | Att | Reg | Att | Reg | Att | Reg | Att |
| CHILDREN | | | | | | | | |
| MOTHERS | | | | | | | | |
| OTHER | | | | | | | | |

6. General comments about program participation (eg. seasonal variation, other factors affecting attendance, etc.)

Center code: _____

Date: _____

Interviewer: _____

FIELD SITE QUESTIONNAIRE - PAGE 2

7. Describe rations distributed:

| | # Recip. | Months Oper. | SFSG KG | WSB KG | Soyoil L |
|-----------|----------|-----------------|------------|-----------|-------------|
| MCH-moth. | | | | | |
| MCH-child | | | | | |
| Scl Feed | | | | | |
| OCF | | | | | |
| Other | | | | | |

8. Listing of site staff involved in food program

| POSITION | EDUCATION/TRAINING/BACKGROUND |
|--------------------------------------|-------------------------------|
| Director | |
| Storage/Warehouse | |
| Finances/Accounting | |
| Food measurement and distribution | |
| Food preparation | |
| Teaching/counseling | |
| Health/medical | |
| Other | |

Center code: _____

Date: _____

Interviewer: _____

FIELD SITE QUESTIONNAIRE - PAGE 3

II. FOOD DISTRIBUTION PROGRAMME - BACKGROUND INFORMATION

1. How long has there been a food distribution programme at this site?

How long has the programme had an agreement with CRS?

2. What changes, if any, have occurred in the programme since its inception in the following areas:

| <u>AREAS OF CHANGE</u> | <u>REASONS FOR CHANGE</u> |
|--------------------------------------|---------------------------|
| * Local sponsor agency | |
| * Number of recipients served | |
| * Type(s) of program | |
| * Storage facilities | |
| * Composition of food ration package | |
| * Method of food distribution | |
| * Other areas | |

3. How was this site originally chosen to participate in the Food for Peace program?

4. Describe any variations in ration distribution that have occurred, giving date and circumstances (e.g., total allocation was not received in time, more people came for food than the number on the agreement with CRS etc.).

Center code: _____

Date: _____

Interviewer: _____

FIELD SITE QUESTIONNAIRE - PAGE 4

5. Describe any unusual situations that have affected the program in the last twelve months (e.g., short rations, crop failure, transportation problems, etc.)

6. How often does the site receive a Title II shipment? Does it come directly from Accra, or is it stored in another warehouse in the region?

7. What are the services provided by CRS under the agreement with the Center (e.g., transport, staff training, information booklets, etc.)

8. What services are provided by the sponsoring or administering agency of the site?

9. Could this site exist without the CRS commodities? How would the services offered or the participation differ without the Title II program?

Center code: _____

Date: _____

Interviewer: _____

FIELD SITE QUESTIONNAIRE - PAGE 5

III. PARTICIPATION INFORMATION

1. What are the criteria for choosing program participants? Who makes the final decision on participants? Do the selection criteria remain constant, or do they change in different situations?

2. What factors, in your opinion, affect recipient participation in the program? Would they also come to the site for other activities (e.g., health care, school, etc.) if the food were not available?

3. Describe all sources of local income that support the food program (e.g., recipient donation, sale of containers, local gardens, other food donations, etc.) and how the funds/donations are used in the program?

4. Is the recipient donation required/encouraged for program participation? What is the level of payment? What happens when a recipient cannot pay?

Center code: _____

Date: _____

Interviewer: _____

FIELD SITE QUESTIONNAIRE - PAGE 7

IV. SITE MANAGEMENT INFORMATION

1. Who manages/funds transportation of the ration allocations to the distribution center?

2. Who is responsible for checking the commodities delivered against the waybill?

Who is responsible for completing the monthly inventory reports?

3. Who is responsible for local storage of the rations?

4. Are warehouse and other management personnel trained in the techniques of safe and sanitary handling and storage of the commodities?

5. Describe any major losses of food due to spoilage, vermin, or theft in the last 12 months. How was the situation handled?

6. Does the full allotment arrive on time? If not, how is this handled?

7. If the total allotment is not received, how are the available commodities distributed?

Center code: _____

Date: _____

Interviewer: _____

FIELD SITE QUESTIONNAIRE - PAGE 8

V. COMMUNITY INFORMATION

1. What is the size of the service area? From how far away do recipients travel, and how do they get to the center?

Does the site deliver rations to any recipients?

2. Describe other sources of support (financial, local foods, other Volags, etc.) that supplement the effects of the Title II program in this area.
3. Are there other food distribution programs in the same service area? Who runs them and how large are they? Do they serve any of the same recipients or families that get Title II foods?
4. Describe typical dietary patterns in the area, especially those of infants, weaning children, pregnant and lactating women. Do the Title II commodities change the diets of recipient families, and if so, how?
5. Are there seasonal variations in the foods consumed or the availability of food to Title II participants?
6. List the major diseases that affect the community.

Center code: _____

Date: _____

Interviewer: _____

FIELD SITE QUESTIONNAIRE - PAGE 9

7. List the types and severity of malnutrition seen among Title II participants and in the community.

8. What are the interrelationships between disease and malnutrition seen in the Title II participants and the community.

9. Are there seasonal variations in disease and malnutrition?

10. Discuss other factors that may affect the health and nutritional status of people in the community.

11. To what degree has the Title II program been able to serve the needy in the community?
 - little or not at all _____
 - slightly _____
 - moderately _____
 - substantially _____
 - all community needs
are met _____

12. In your opinion, what types of local level programs would have the greatest impact on nutritional and health problems of the community?

Center code: _____

Date: _____

Interviewer: _____

FIELD SITE QUESTIONNAIRE - PAGE 11

4. GROWTH SURVEILLANCE: Observe weighing process. Are scales calibrated? How accurate are the measurements? How is the child's age determined? Who keeps the growth chart?

5. STORAGE/WAREHOUSE: Observe the warehouse area for security against theft, spoilage, and vermin. Are commodities stored away from the wall and off the floor? Are adequate inventory records maintained?

Center Code: _____

Date: _____

Location: _____

Interviewer: _____

Respondent type: _____

BRIEF SITE QUESTIONNAIRE

1. Describe program operations, including the type of food distribution program, other services provided, and days of operation:
2. General program history (length of operations, administration, changes in the program over time, etc.)
3. General situation in the area (food availability, economic conditions, nutrition and health status of residents, incidence and type of malnutrition, infrastructure, etc.)
4. Typical dietary patterns in the region (especially those of infants, weaning children, pregnant and lactating women)
5. Describe criteria for participation in the food distribution program:
6. Are there any other commodity or food distribution programs available to area residents?
7. How does the respondent feel that the commodities are used by recipients?
8. Estimated impact of the food distribution program on nutritional and health status of target groups:
9. Respondent opinion concerning the types of local level programs that would have the greatest impact on nutritional and health needs:
10. Total number and type of rations supplied by the program:
11. Describe any difficulties encountered in supplying rations to all participants in the past year:

MISCELLANEOUS SITE NOTES AND COMMENTS

Center Code: _____

Date: _____

Location: _____

Interviewer: _____

Region: _____

PARTICIPANT SURVEY - PAGE 1

1. Respondent age (approx.): _____ Sex: _____
2. Food program: MCH _____ ScF _____ OCF _____ FFW _____
3. Length of time on program: _____
4. Number and type of rations received for family unit: _____

5. Number in family unit: _____
6. How are the FFP commodities used:
 - to supplement family diet _____
 - to substitute for local foods _____
 - sold to increase family income _____
 - sold to buy other foods _____
7. What are the ages of the children in the family? _____

8. How long are children breastfed? _____
Are formula or other milk combinations used? _____

9. At what age are foods other than milk first used? _____

10. Do pregnant women eat special foods, or are any foods forbidden during pregnancy? _____

11. Describe any food production activities the family engages in (eg. gardening, foraging, raising livestock, etc.). Which family member is responsible for these activities? _____

Center Code: _____

Date: _____

Location: _____

Interviewer: _____

Region: _____

PARTICIPANT SURVEY - PAGE 2

13. Describe the typical daily intake for the following family members:

- small infant
- weaning infant
- young child (2-4 years)
- nursery school/kindergarten
- elementary school children
- teenagers
- head of household (male)
- mother
- pregnant or lactating woman
- grandmother/grandfather
- sick child

Center Code: _____

Date: _____

Location: _____

Interviewer: _____

Region: _____

PARTICIPANT SURVEY - PAGE 3

Family Food Recall

INSTRUCTION: Try to interview the person responsible for meal preparation for the family unit. Ask them to describe all the food consumed by the family during the preceding day, including estimations of amounts served to each family member. Include all snacks as well as foods and seasonings used in cooking (e.g., oil). Describe how Title II commodities are used.

| Foods Prepared | Sources of Food | Amounts Served | Comments |
|----------------|-----------------|----------------|----------|
|----------------|-----------------|----------------|----------|

If this was an unusual day, please explain the circumstances.

Center Code: _____

Date: _____

Location: _____

Interviewer: _____

Region: _____

Respondent Type: _____

OPINIONNAIRE

I will read a statement and ask you whether you completely agree (5), just agree (4), neither agree nor disagree (3), disagree (2), or completely disagree (1).

(Other codes include D = don't know, N = no answer, I = inapplicable.)

1. I am satisfied with the way the Food for Peace program is operated at this center. 5 4 3 2 1 D N I

Comment: _____

2. I feel that the amount of food in the ration package is adequate for most participants. 5 4 3 2 1 D N I

Comment: _____

3. I feel that the kinds of food in the ration package are a good choice for this area. 5 4 3 2 1 D N I

Comment: _____

4. I believe that the Food for Peace rations have helped the health of the participants. 5 4 3 2 1 D N I

Comment: _____

5. Most of the people that need the ration packages in this area do receive them. 5 4 3 2 1 D N I

Comment: _____

6. Instead of the rations, the program should give the people money to buy the foods they want. 5 4 3 2 1 D N I

Comment: _____

7. Babies should eat the same food as the rest of the family. 5 4 3 2 1 D N I

Comment: _____

8. A pregnant woman needs more food than when she is not pregnant. 5 4 3 2 1 D N I

Comment: _____

9. Children should be fed how many times a day?
Once _____, Twice _____, 3 times _____, If more, specify _____

Comment: _____

Center Code: _____

Date: _____

Location: _____

Interviewer: _____

Region: _____

Respondent Type: _____

OPINIONNAIRE

10. How do the families that receive the rations use them in this area:

- a. Feed entire family? _____
- b. Feed only children? _____
- c. Feed pregnant and nursing women? _____
- d. Feed only other members of family? _____
- e. Sell the ration and buy other food? _____
- f. Sell the ration and buy other things? _____

11. Is there anything else we have not talked about concerning the rations that should be mentioned?

Date: _____

Observer: _____

MARKET/COMMUNITY SURVEY - Page 1

1. Market location: _____
2. Service area: _____
3. Market days and hours: _____
4. General description of market (availability of foods and supplies, prices, method of exchange, etc.)

5. List major food items, availability, and prices (including black market exchange rate if appropriate).

| <u>Food Grouping</u> | <u>Local Food(s)</u> | <u>Availability</u> | <u>Price</u> |
|-----------------------|----------------------|---------------------|--------------|
| WSB Equivalent | | | |
| SFSG Equivalent | | | |
| Soyoil Equivalent | | | |
| Grains | | | |
| Proteins | | | |
| Roots and Tubers | | | |
| Fruits/ Vegetables | | | |
| Other Foods | | | |

BEST AVAILABLE DOCUMENT

Appendix H

Ethiopian Nutrition Institute Growth Monitoring Comparisons

1. Weight for Length
2. Length for Age
3. Weight for Age
4. Arm Circumference

Ethiopian Nutrition Institute Growth Monitoring Comparisons - Weight for Length

| Standard | | 90% | | 30% | | 70% | | 60% | | 60% | |
|----------|-------|-----|-------|-----|-------|-----|------|-----|------|-----|------|
| NO | % | NO | % | NO | % | NO | % | NO | % | NO | % |
| 59 | 57.28 | 28 | 27.18 | 9 | 8.74 | 7 | 6.80 | - | - | - | - |
| 67 | 47.13 | 24 | 16.90 | 31 | 21.83 | 11 | 7.75 | 7 | 4.93 | 2 | 1.41 |
| 33 | 52.38 | 19 | 30.16 | 9 | 14.29 | 2 | 3.18 | - | - | - | - |
| 35 | 64.82 | 10 | 18.52 | 7 | 12.96 | | | 2 | 3.70 | - | - |
| 132 | 64.39 | 47 | 22.93 | 13 | 8.73 | 5 | 2.44 | 1 | 0.49 | 2 | 0.98 |
| 56 | 62.92 | 25 | 28.09 | 5 | 5.62 | 2 | 2.25 | 1 | 1.12 | - | - |
| 70 | 59.32 | 30 | 25.42 | 14 | 11.07 | 3 | 2.54 | | | 1 | 0.85 |
| 106 | 53.54 | 48 | 24.24 | 28 | 14.14 | 8 | 4.04 | | 1.01 | 6 | 3.03 |
| 57 | 57.58 | 26 | 26.26 | 11 | 11.11 | 4 | 4.04 | 1 | 1.01 | - | - |
| 57 | 47.11 | 36 | 29.75 | 19 | 15.70 | 6 | 4.96 | 1 | 0.83 | 2 | 1.65 |
| 32 | 60.38 | 10 | 18.87 | 7 | 13.21 | 2 | 3.77 | 2 | 3.77 | - | - |
| 704 | 56.54 | 303 | 24.34 | 158 | 12.69 | 50 | 4.02 | 17 | 1.37 | 13 | 1.04 |

Ethiopian Nutrition Institute Growth Monitoring Comparisons - Length for Age

| standard | | 90% | | 80% | | 70% | | 60% | | 60% | | Not Stat | |
|----------|-------|-----|-------|-----|-------|-----|------|-----|------|-----|------|----------|--|
| No | % | NO | % | NO | % | NO | % | NO | % | NO | % | NO | |
| 24 | 23.08 | 48 | 46.15 | 22 | 21.15 | 9 | 8.65 | 1 | 0.96 | | | | |
| 52 | 36.11 | 59 | 40.97 | 24 | 16.67 | 9 | 6.25 | | | | | | |
| 17 | 25.37 | 39 | 53.21 | 5 | 7.46 | 2 | 2.99 | | | 1 | 1.49 | | |
| 11 | 19.64 | 32 | 57.14 | 12 | 21.43 | | | | | | | 1 | |
| 58 | 28.02 | 119 | 57.49 | 24 | 11.59 | 5 | 2.42 | | | 1 | 0.48 | | |
| 13 | 14.77 | 45 | 51.14 | 27 | 30.68 | 2 | 2.27 | | | 1 | 1.14 | | |
| 36 | 29.75 | 68 | 56.20 | 12 | 9.92 | 9 | 2.48 | 2 | 1.65 | | | | |
| 71 | 35.68 | 102 | 54.27 | 17 | 8.55 | 1 | 0.50 | 1 | 0.50 | | | 1 | |
| 33 | 33 | 53 | 53 | 12 | 12 | 1 | 1 | | | 1 | 1 | | |
| 27 | 22.31 | 65 | 53.72 | 22 | 18.18 | 2 | 1.65 | 2 | 1.65 | 2 | 1.65 | 1 | |
| 19 | 35.85 | 25 | 47.17 | 9 | 16.23 | | | | | | | | |
| 361 | 28.72 | 661 | 52.59 | 186 | 14.80 | 34 | 2.70 | 6 | 0.48 | 6 | 0.48 | 3 | |

Ethiopian Nutrition Institute Growth Monitoring Comparisons - Weight for Age

| standard | | 90% | | 80% | | 70% | | 60% | | < 60% | | Not St |
|----------|-------|-----|-------|-----|-------|-----|-------|-----|-------|-------|------|--------|
| NO | % | NO | % | NO | % | NO | % | NO | % | NO | % | NO |
| 15 | 14.42 | 26 | 25 | 29 | 27.88 | 22 | 21.15 | 7 | 6.73 | 5 | 4.82 | |
| 24 | 16.67 | 30 | 20.83 | 33 | 22.92 | 27 | 18.75 | 18 | 12.50 | 12 | 8.33 | |
| 14 | 21.88 | 10 | 15.63 | 21 | 32.81 | 13 | 20.31 | 4 | 6.25 | 2 | 3.13 | |
| 7 | 12.50 | 17 | 39.36 | 18 | 32.14 | 7 | 12.50 | 6 | 10.71 | 1 | 1.79 | |
| 50 | 24.15 | 52 | 25.12 | 51 | 24.64 | 39 | 13.84 | 10 | 4.85 | 4 | 1.93 | 1 |
| 10 | 11.36 | 12 | 20.46 | 27 | 30.68 | 21 | 23.86 | 8 | 9.09 | 4 | 4.55 | |
| 30 | 24.79 | 27 | 22.32 | 43 | 35.54 | 11 | 9.09 | 6 | 4.96 | 2 | 1.65 | 2 |
| 44 | 22.11 | 66 | 33.17 | 50 | 25.12 | 24 | 12.06 | 8 | 4.02 | 7 | 3.52 | |
| 17 | 17 | 36 | 36 | 20 | 20 | 19 | 19 | 7 | 7 | 1 | 1 | |
| 19 | 15.70 | 20 | 16.53 | 32 | 26.45 | 22 | 23.14 | 20 | 16.53 | 2 | 1.65 | |
| 12 | 22.64 | 13 | 74.53 | 14 | 26.42 | 12 | 22.64 | 1 | 1.89 | 1 | 1.89 | |
| 242 | 19.25 | 315 | 25.06 | 338 | 26.89 | 223 | 17.74 | 95 | 7.56 | 41 | 3.26 | 3 |

Ethiopian Nutrition Institute Growth Monitoring Comparisons - Arm Circumference

| Standard | | 90% | | 80% | | 70% | | 60% | | ≤60% | |
|----------|-------|-----|-------|-----|-------|-----|-------|-----|------|------|------|
| NO | % | NO | % | NO | % | NO | % | NO | % | NO | % |
| 3 | 7.50 | 13 | 32.50 | 19 | 47.50 | 4 | 10.05 | - | - | 1 | 3 |
| 8 | 14.82 | 21 | 38.89 | 16 | 29.63 | 9 | 16.67 | - | - | - | - |
| 9 | 37.50 | 9 | 37.50 | 6 | 25 | - | - | - | - | - | - |
| 14 | 20.90 | 30 | 44.78 | 19 | 28.36 | 4 | 5.97 | - | - | - | - |
| 2 | 7.14 | 12 | 42.86 | 10 | 35.71 | 3 | 10.72 | * 1 | 3.57 | - | - |
| 19 | 39.58 | 24 | 50 | 5 | 10.42 | - | - | - | - | - | - |
| 22 | 30.99 | 35 | 49.30 | 13 | 18.31 | 1 | 1.41 | - | - | - | - |
| 9 | 24.32 | 18 | 48.65 | 6 | 16.22 | 4 | 10.81 | - | - | - | - |
| 8 | 29.63 | 10 | 37.04 | 8 | 29.63 | 1 | 3.70 | - | - | - | - |
| 5 | 11.63 | 16 | 37.21 | 16 | 37.21 | 6 | 13.95 | - | - | - | - |
| 3 | 23.08 | 6 | 46.15 | 4 | 30.77 | - | - | - | - | - | - |
| 102 | 23.57 | 194 | 42.92 | 122 | 26.99 | 32 | 7.08 | 1 | 0.22 | 1 | 0.22 |