

CLASSIFICATION
PROJECT EVALUATION SUMMARY (PES) - PART I

Report Symbol U-447

1. PROJECT TITLE Upper Volta Food for Peace/Title II Evaluation - Catholic Relief Services	2. PROJECT NUMBER PL 480, Title II	3. MISSION/AID/W OFFICE Upper Volta
4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 686-82-03		<input type="checkbox"/> REGULAR EVALUATION <input checked="" type="checkbox"/> SPECIAL EVALUATION
5. KEY PROJECT IMPLEMENTATION DATES A. First PRO-AG or Equivalent FY <u>N/A</u> B. Final Obligation Expected FY <u>N/A</u> C. Final Input Delivery FY <u>N/A</u>	6. ESTIMATED PROJECT FUNDING * A. Total \$ <u>17.8 million</u> B. U.S. \$ <u>15.4 million</u>	7. PERIOD COVERED BY EVALUATION From (month/yr.) _____ To (month/yr.) _____ Date of Evaluation Review <u>January 1981</u>

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airmgram, SPAR, PIO, which will present detailed request.)	B. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
<p>USAID/UV and Catholic Relief Services/UV are presently reviewing the final evaluation report (attached) and recommendations. CRS/UV, at the request of USAID/UV, has recently identified those recommendations they feel capable of implementing into their current programs. They have also requested a meeting with USAID/UV in order to discuss how these programmatic changes will tie into USAID's country priorities and the new direction of using food aid as a production incentive. This meeting, which will take place soon, will result in preparation of a CRS multi-year strategy and programming document.</p> <p>Because the evaluation in French has not yet been finalized the GOUV will not participate in these preliminary discussions between USAID/UV and CRS/UV. At the present, a draft of the final report in French is being reviewed by USAID and CRS. Once the necessary corrections are made, the draft will be sent to the evaluation contractor, ISTI, for final publication. The appropriate GOUV ministries have been informed of these procedures and will receive the final French version of the evaluation report upon its arrival. At that time a meeting with USAID, CRS, and the ministries will be scheduled.</p> <p>* Approximate per ann. figure.</p>	MICROFILMED FROM BEST AVAILABLE COPY	

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS <input type="checkbox"/> Project Paper <input type="checkbox"/> Implementation Plan e.g., CPI Network <input checked="" type="checkbox"/> Other (Specify) <u>Revise CRS operation plan, develop multi-year plan.</u> <input type="checkbox"/> Financial Plan <input type="checkbox"/> PIO/T <input type="checkbox"/> Logical Framework <input type="checkbox"/> PIO/C <input type="checkbox"/> Other (Specify) _____ <input type="checkbox"/> Project Agreement <input type="checkbox"/> PIO/P	10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT A. <input type="checkbox"/> Continue Project Without Change B. <input type="checkbox"/> Change Project Design and/or <input type="checkbox"/> Change Implementation Plan C. <input type="checkbox"/> Discontinue Project
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11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles) a. Howard C. Thomas, Chief, Office of Human Resources, USAID/Upper Volta; b. Suzanne Theroux, Food for Peace Monitor, USAID/Upper Volta.	12. Mission/AID/W Office Director Approval Signature <u>Richard C. Meyer</u> Typed Name <u>Richard C. Meyer</u> Date <u>5-3-82</u>
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UPPER VOLTA FOOD FOR PEACE/TITLE II EVALUATION
FINAL REPORT

Prepared for:

Office of Food for Peace
Agency for International Development
Washington, D.C.
Under IQC No. AID/SOD/POD-C-0264

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ACKNOWLEDGMENTS

The core team for the evaluation was: - Betsy Stephens, Team Leader, ISTI; Joanne Leslie, Nutritionist, ISTI; Elon Gilbert, Agricultural Economist, ISTI; Judith Gilmore, Evaluation Officer, Bureau for Private and Development Cooperation, AID/W.

Betsy Stephens negotiated the Scope of Work, coordinated the evaluation activities and preparation of the final report and played a major role in designing the data collection instruments which were used in the field. Joanne Leslie designed, supervised, analyzed, and wrote up all of the nutrition-related research. Elon Gilbert took the major responsibility for the Food for Work evaluation, in addition to doing all of the budgetary and economic analyses, and a review of the food and agricultural situation in Upper Volta. Judith Gilmore advised the team on evaluation methodology. She designed, supervised, interpreted, and wrote up aspects of the study relating to knowledge, attitudes, and practices among clinic staff and program participants. She also defined the goals and objectives of the FFP/UV program from the point of view of the USAID mission and FFP/W.

Other members who joined the team in Upper Volta were:

- Chris Brown, Food Monitor, Contract Employee, USAID/Ouagadougou.
- Mellen Duffy, Nutritionist, REDSO/USAID/Abidjan.
- Vara LaFoy, FFP Officer, REDSO/USAID/Abidjan.
- Mme. Zio Martine, Nutritionist, Ministry of Health/GOUV.
- Siry Bomane, Nutritionist, Ministry of Rural Development/GOUV.
- Mme. Madeleine Zigani, Social Worker, Ministry of Social Affairs/GOUV.
- Sinini Adamon, Social Worker, Ministry of Social Affairs, GOUV.
- Zerbo Saibo, Educator, Ministry of Education, GOUV.
- Jay Smith, Economist, USAID/Ouagadougou.
- Abe Djibo, Economist, USAID/Ouagadougou.
- Celestine Lankoande, Interpreter.
- Bibiane Sanon, Interpreter.
- Paulene Zongo, Interpreter.

Chris Brown, with good logistic support from the USAID Mission, organized and coordinated the details of the team's activities in Upper Volta, participated in collecting information during the field visits and in interpreting the findings. She also prepared the map of centers visited. Mellen Duffy participated in the field visits, collated and analysed data from the master charts in CRS headquarters in Ouagadougou and Bobo-Dioulasso, did a thorough analysis of the preschool and school rations, and contributed to refining the conclusions and recommendations. Vara LaFoy joined the team for the first and last week of the evaluation and played a very important role in focusing the team's analysis on the issues which are of major importance to policy and program decisions. She clarified FFP policies and organization, and analyzed and interpreted parts of the field questionnaires. Jay Smith joined the field visits for one week and helped collect and analyze information from each of the programs. He also did the demographic analysis and produced the data and tables on participation in the preschool and SF programs.

Each of the Voltaic government members of the team interpreted his or her Ministry's role in the FFP program and the Ministry's recommendations for modification of the program. Mme. Zio Martine spent two weeks in Bobo-Dioulasso tirelessly making all of the field visits in that region. She especially studied the health and nutrition education aspects of the program, and examined the children for specific vitamin and mineral deficiencies. Her thoughtful comments aided the team's understanding of relevant issues. Siri Bomane stayed in the Fada-N'Gourma region for two weeks, the most rugged assignment of all. He interviewed center staff in each of the preschool centers visited in the Fada area and wrote helpful reviews of each of those visits that especially aided the team in evaluating the staff. Mme. Madeleine Zigani and Sinini Adamon alternated joining field visits in the Ouagadougou area and were a great help to those teams. In particular, Mme. Zigani assisted with the team's understanding of the participant interviews. Zerbo Saibo also joined the Ouagadougou team.

Each of the interviewers worked in one of the three regions during the field visits. They interviewed two or three mothers at each of the centers visited, assisted the team in understanding the education lecture and cultural nuances of what was being observed, and frequently helped interpret at the FFW projects. Celestine Lankoande and Bibiane Sanon assisted the team with the modification of the participant interview schedule during the week when it was being tested. Ms. Sanon analysed parts of the completed questionnaires and prepared a socio-economic profile of program mothers.

While the CRS/UV staff were of course, not part of the team, they collaborated with the team and made major contributions to the design of the study, the planning and execution of the field visits, the interpretation of findings, and the recommendations. All of the judgments were made by the team but many of the ideas were initially formulated by CRS. All of the CRS/UV staff were cooperative and helpful, but the following worked with the team particularly closely:

- Peter Strzok, Director
- Paula Bertolin, Chief Food and Nutrition Supervisor
- Alassane Konate, Project Manager
- Yembi Dieudonne Ouedraogo, Representative, Bobo-Dioulasso Office
- Albert Postle, Program Assistant
- Beatrice Kam, Food and Nutrition Supervisor
- Francoise Pilon, Food and Nutrition Supervisor
- Barbara Fegley, Food and Nutrition Supervisor
- Sister Helen Baron, Food and Nutrition Supervisor
- Francoise Crelerot, Food and Nutrition Supervisor
- Susan Wright, Administrative Assistant for Nutrition Office
- Elizabeth Gaylord, Program Assistant

We wish to thank Dr. Capone, CRS African Regional Nutrition Director, for the use of the GSS charts in conjunction with the the participant interview schedule. Recognizing that these charts are copyrighted, the data will not be used to carry out any original studies, analyses or comparisons outside of this evaluation.

FFP/W did an excellent job briefing and preparing the team for the evaluation, and also provided continuous and constructive support in Washington, and while they were in the field. In particular, the team received assistance from the

Project Officer, Carolyn Weiskirch, Evaluation Officer, Program Division, FFP/W; Peggy Sheehan, Chief, Title II FFP/W; and Nancy Fox, Officer for Africa, Title II FFP/W.

The Project Officer at ISTI, Nihal Goonewardene, was unerringly efficient, and supportive of the teams's efforts and Aisha Samatar typed, retyped, and typed again the draft and final reports.

B.K. Wesley Copeland
President
International Science and Technology Institute

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- Ticklist of information to be obtained from USAID/UV
- Ticklist of information to be obtained from CRS/UV
- Ticklist for Observational Visits to FFP/PMI Centers*
- Ticklist for Observational Visits to FFP/SF Schools*
- Ticklist for Observational Visits to FFW Projects*
- Directives concernant l'entretien avec le personnel du centre de distribution FFP**
- Directives concernant l'entretien avec les participants**
- Guidelines for Discussions with Participants***
- Questionnaire pour les participants aux projets d'Investissement Humain****

Appendix C: Program Budget and Cost Per Beneficiary for 1980

Appendix D: Seasonal and regional variation in Malnutrition in Upper Volta

Appendix E: GOUV reports on the FFP/UV Evaluation

Ministry of Social Affairs

* These ticklists were translated into French in Washington.
** An English (and French) version of these interview schedules was prepared in Washington and revised (in French only) in Upper Volta.
*** This is a revision of the questionnaire which was used for the interviews.
**** This questionnaire was developed in Upper Volta.

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1. EVALUATION APPROACH

During the first phase of the evaluation (November-December 1980), following extensive briefings by FFP/W and a review of relevant documents, the Team Leader spent a week in Upper Volta refining a Scope of Work that was agreed upon by CRS/UV, USAID/UV, and the contractor. (See, The Scope of Work: Appendix A). The core team then worked in Washington developing drafts of all of the data collection instruments to be used in the field. (See Appendix B). They were sent to CRS/UV and USAID/UV for their review prior to the team's arrival in Upper Volta (with the exception of the participant questionnaire). Team members also met with CRS/NY, held further meetings with FFP/W, and reviewed background materials.

The core team was in Upper Volta from January 4-31, 1981. During the first week, the team (including members who joined in Upper Volta) met with individuals from the USAID mission, CRS, and the Ministries of Health, Rural and Development and Social Affairs: reviewed the CRS briefing papers prepared in response to the Ticklist of questions (which had been sent in advance to CRS); gathered additional documentation; field tested and revised the questionnaires for participants in the preschool and FFW programs, and the questionnaire for preschool center staff; trained the interviewers; and spent one day in the field testing the entire approach to the field visits planned for the following two weeks.

The team spent the second and third weeks in the field, divided into three groups for the second week and three different groups for the third week. Each group stayed in either Ouagadougou, Bobo-Dioulasso, or Fada-N'Gourma for five or six days and made day visits, and in some cases overnight visits, to villages in the region. In general the team visited a preschool center in the morning, a school canteen at noon, and a Food for Work project in the afternoon. In addition, the teams met with prefects and sub-prefects, regional representatives of the Ministries of Health, Rural Development, Education, and Social Affairs, Chiefs, missionaries, overseas volunteers, and visited regional training centers. Several members of the team also spent time collecting nutritional status information from the master charts in the CRS central offices.

Altogether, the team visited 30 preschool centers during a weighing session. (See Figure 1.1, Map of Centers visited.) Of those visited, 4 were under the auspices of the Ministry of Social Affairs, 9 under a mission, 5 under the Ministry of Health, 4 under the Ministry of Rural Development, 7 under a village group, and 1 under CESA0 (a rural development training center).

At each center, the team completed a center ticklist, a center staff questionnaire, and 2 or 3 participant interviews. (See Appendix B for those schedules). In addition, in centers in which adequate information on new inscriptions was available, the team collected information on the age, weight and date of inscription of between 30 and 60 new inscriptions, and recorded comparable information on program children attending the center that day.

The team visited 23 school canteens and completed a ticklist for SF visits at each one. (See Appendix B for the SF ticklist). Twenty-five Food for Work projects were visited and in most, the FFW ticklist was completed (although it was found to be cumbersome and not always relevant). Some interviews were also conducted with FFW participants, although again, the interview schedules were not very satisfactory.

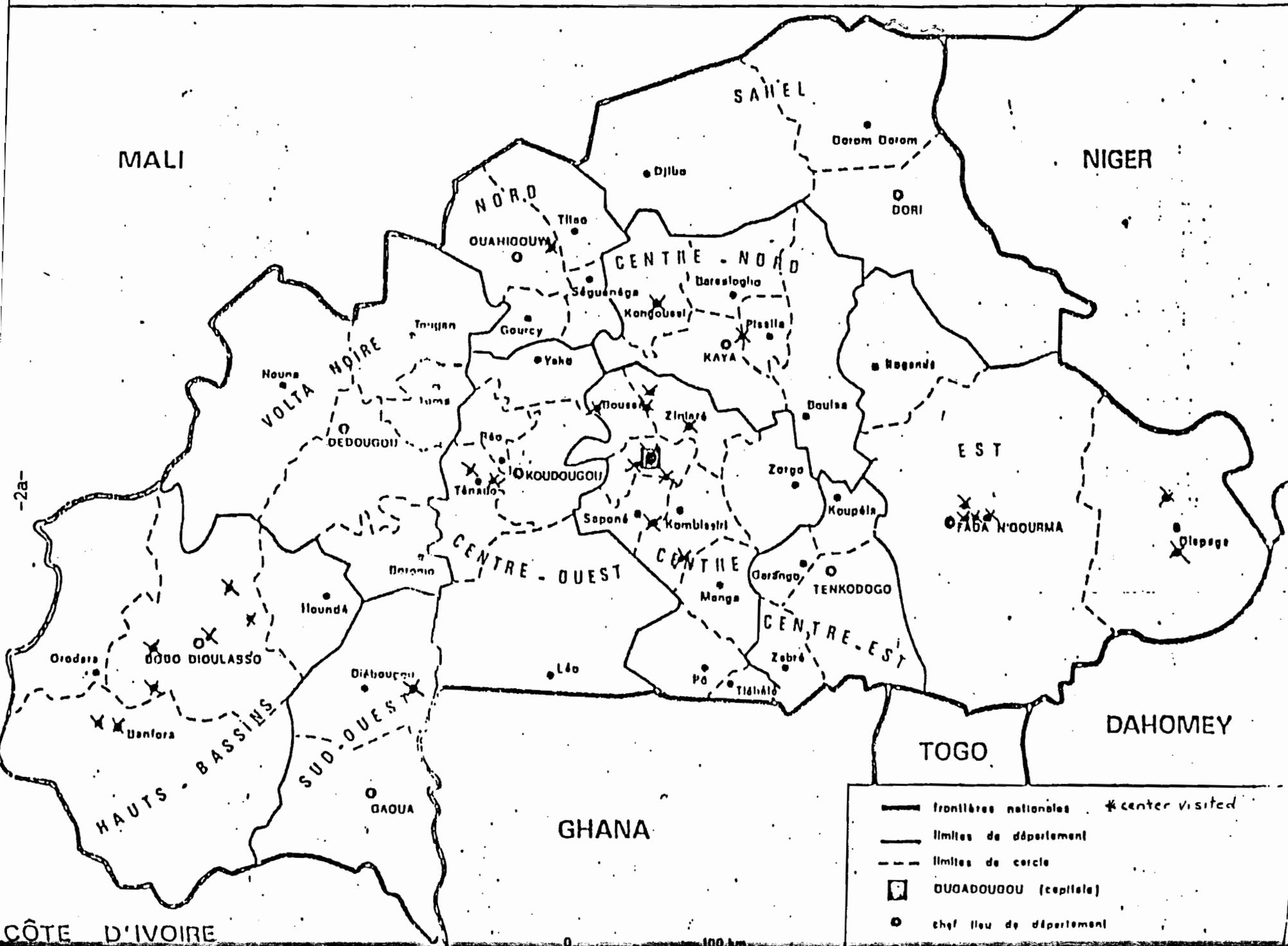
During the final week, the team collected and analysed the major findings on the operations and impact of the preschool, SF and FFW programs. Several meetings were held with individuals from the GOUV, USAID, CRS, and other interested organizations to discuss the interpretation of the findings. Preliminary conclusions and recommendations were presented to the GOUV, USAID, and CRS prior to the team's departure from Upper Volta.

The draft report was completed in February 1981 and circulated for comments by FFP/W to the USAID/UV mission, CRS, the GOUV, and other concerned offices within AID/W. All comments were received by late August and the draft was revised by the core team.

COTE D'IVOIRE

Ministère de l'Éducation
et de la Formation

Figure 1.1 MAP OF CENTERS VISITED



2. BACKGROUND

2.1 Food and Agriculture in Upper Volta

Upper Volta as a nation is heavily dependent upon its agricultural sector. Agriculture accounts for about 40% of GNP and nearly all the exports. More significantly, agriculture provides the principal employment for more than 80% of the population. Upper Volta is also one of the poorest countries in terms of per capita income (about \$180 per capita in 1979) in the developing world. The average per capita grain production is 200 kg. per annum. The country is densely populated by African standards (total estimated population 6,101,000 million in 1978).* A national population density figure is not particularly meaningful since a large part of the country is not arable. There are approximately only 1 1/2 hectares of arable land per capita. Even this figure does not take account of the very uneven distribution of population and land within the country. The rural population is heavily concentrated on the Mossi plateau in the central portion of the country, while areas to the east and west (Bobo - Dioulasso and Fada-N'gourma) are much less densely populated (see map, Figure 1.1) and relatively better endowed in terms of the quality of soils and the amount and distribution of rainfall.

Historically Upper Volta tended to be self sufficient in staple foods with considerable year to year variation (see Table 2.1). In the early 1900's there were famines with no possibility of getting external assistance, but this has changed in recent years with the availability of food aid (see Table 2.2). In the post World War II period, rainfall was generally adequate but changes began to occur in the late 1960's when there was some suggestion of a declining trend in rainfall. Whether this represents a southward shift of rainfall belts which is likely to continue is a matter of considerable debate among climatologists. Obviously a reduction of the amounts of rainfall and the duration of the rainy season would have serious adverse consequences for the food situation in the country.

During the period of the drought in the early 1970s, the deficit reached approximately 250,000 tons or 23% of domestic requirements. During the better crop years in the mid 1970s the country was virtually self sufficient, but there has been a general trend toward increasing imports of food, mostly in the form of food aid. (See Table 2.2). The 1980 harvest appears to be no better than mediocre with total crop failures reported from a number of local areas. There is a considerable range of estimates of the size and geographic extent of the deficit this year, but the GOUV estimates the national deficit at 95,000 tons of grain.

*Institut National de la Statistique et de la Demographie, Recensement General de la Population, Decembre 1975, Resultats Definitifs, Vol.I: les données nationales. (Estimate for 1980 based on a population growth rate that is probably underestimated.)

TABLE 2.1

Trends in Per Capita Cereal Production

Year	Cereal Production ^{1/} (000 mt)	Population (millions)	Production Per Capita (kg)
1962	701	4.3	163
1963	876	4.4	199
1964	901	4.4	205
1965	1,187	4.5	265
1966	1,012	4.6	220
1967	1,036	4.7	220
1968	1,057	4.7	225
1969	1,061	4.8	221
1970	1,011	4.9	206
1971	1,018	5.0	204
1972	1,051	5.0	204
1973	991	5.1	194
1974	812	5.2	156
1975	1,160	5.3	219
1976	1,088	5.4	201
1977	1,196	5.5	217
1978	1,025	5.6	183
1979	1,147	5.7	201

^{1/} Sum of sorghum, millet, maize, and rice (converted from paddy at 65% for the previous year).

Source: Cereal Production derived from FAO, Production Yearbook, Rome, various years. Population from World Bank, "Basic Data Sheets" (for Atlas), Washington, June 1980.

Within Upper Volta there are considerable differences between regions with regard to adequacy of food supplies. The Mossi plateau, which includes nearly 60% of the population and thirty-nine persons per square kilometer, tends to be a chronic deficit area. Land tends to be over exploited with shortened fallow periods which, in turn, have potentially serious longer term implications for soil quality and productive potential. Potential increases in production through an expansion in cultivated land are very limited.

The plateau tends to be the major source of out migration, both to the less densely settled parts of the country in the east and west (12 persons per km²), as well as to the urban centers of Ougadougou and Bobo-Dioulasso. By far the most important destinations of migrants are the coastal areas to the south, namely Ivory Coast and Ghana. Approximately three quarters of a million Voltaics, mostly young single men, are currently living and working outside the country. This out migration, combined with high levels of infant mortality, account for the relatively low annual growth rate of the population which is estimated at 1.6% for the period 1960-78.

TABLE 2.2

FOOD AID 1/

(thousands of metric tons)

	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1978</u>	<u>Total 72-78</u>	<u>% of Food Aid</u>
European Economic Community	16.8	21.7	19.4	2.8	6.6	3.1	11.3	81.7	23.6
France	3.5	10.0	10.0	-	3.0	4.0	4.0	34.5	10.0
U.S.	27.0	42.2	5.6	6.2	6.0	20.0	27.0	134.0	38.6
Canada	2.0	2.3	5.9	3.4	2.4	-	-	16.0	4.6
Germany	3.0	3.7	3.2	-	-	2.5	2.5	14.9	4.3
World Food Program	4.2	6.0	6.5	3.9	1.0	-	15.2	36.8	10.6
Others	<u>.5</u>	<u>4.3</u>	<u>12.3</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>11.8</u>	<u>28.9</u>	<u>8.3</u>
Total	57.0	90.2	62.9	16.3	19.0	29.6	71.8	346.8	100.0

1/ Other donor data appear to be based on deliveries.

Source: CDSS: 1980, USAID, Ouagadougou

Out migration reduces the demands on the county's food supplies and remittances from abroad provide families with the means to purchase food to supplement their own production. However, as is commonly the case, those relatively better off in terms of physical capacity and skills are well represented among the migrant population. These factors, combined with growing pressure on available land on the Mossi plateau, act to gradually reduce production of staple foods per capita.

In other parts of the country, there is generally sufficient grain produced to meet local needs and offer a surplus. The exception is the Sahel Department where low rainfall mitigates against the expansion of crop production. Grazing of cattle and small ruminants is the dominant agricultural activity in this area. In contrast, the west and southwest account for most of the surplus agricultural production of the country. The area routinely produces a surplus of grains, especially sorghum and maize, which are exported to the urban centers and the deficit parts of the country. In addition, the area is responsible for a large proportion of the agricultural exports, and cash crops, notably cotton and sugar.

Prospects for agricultural development in the medium term (next 15 to 20 years) must be rated as no better than modest. Yield levels for the major starchy staples, sorghum and millet, are at low levels (with considerable year to year and area to area variation) which means there is considerable room for improvement within the genetic potential of available varieties. However, major breakthroughs involving significant increases in agricultural productivity that are readily integrated into existing farming systems, and are consistent with the country's input delivery system and output marketing capacity, are unlikely to emerge in the short run. The situation is somewhat more favorable for maize in terms of the availability of improved varieties. However, improvements in maize production are likely to primarily benefit the already relatively well endowed areas in the southwest, aggravating regional disparities in income and food availability.

The progress that Upper Volta is able to make as a country, and the extent that the need for food aid is likely to continue or quite possibly grow, will depend to a considerable degree on progress made in increasing agricultural productivity for the major staple foods, sorghum and millet. Out migration alone, (assuming that the number of jobs available for migrants continues to increase), will probably result in a continuing decline in per capita agricultural production in the densely populated Mossi plateau for reasons already discussed, unless there is some improvement in agricultural productivity. Efforts are now being made to identify varieties and agronomic practices for sorghum and millet that represent improvements and can be readily integrated into existed farming systems. In the medium term, these efforts are unlikely to do more than arrest the decline. Thus most projections of production and demand for staple foods in Upper Volta predict that the country will drift further into a deficit position.* In the longer term Upper Volta certainly has the potential not only to achieve self sufficiency, but to be an exporter of grains and other agricultural commodities, particularly to the deficit countries in the region.

*See FAO, Perspectives du Developement Agricole à long Terme de la Haute Volta, Rome, 1976.

Given the small size of the food aid program relative to total consumption in the country, it seems unlikely that there is any appreciable impact on subsistence food production. Total food aid in 1978 was 71,800 mt as compared to an estimated total cereal production of 1,025,000 mt. The CRS program which totaled 27,000 tons in 1978 is less than 3% of total cereal production in the country. Further, a major portion of the CRS program is the school feeding program which seems unlikely to have much of any effect upon local food prices or upon normal family food consumption patterns. There have been no demonstrated effects of the program on food prices and even if an effect could be demonstrated in local situations, there is some question as to whether this would have any appreciable effect on subsistence agricultural production.

2.2. Nutritional Status in Upper Volta

In July of 1979, following the Alma Ata Conference, the Ministère de la Santé Publique of UV issued a national plan for provision of primary health care.** This report identifies insufficient food and specific nutrient deficiencies as one of the four priority health problems to be addressed. The report estimates that 50% of children examined at dispensaries in Upper Volta are malnourished and attributes this high prevalence of malnutrition to a combination of insufficient food production, poor food distribution, inadequate purchasing power and ignorance on the part of the population. Although no numbers are provided, the report also states that available calories per capita are at or slightly below the daily requirement, and that there appears to be sufficient protein available but it is of poor quality.** This same report also identified major causes of child mortality in Upper Volta. In the 0-1 year age group, the major reported cause of death is malaria, followed by measles, diarrhea, whooping cough and respiratory illness. In the 1-4 year old age group, the major reported cause of death is measles, followed by diarrhea and malaria.

Other government statistics also indicative of a high level of child malnutrition were presented at a workshop on multi-sectoral nutrition planning held in Ouagadougou in September, 1978.*** The infant mortality rate was reported to be 190 per 1000 live births and the 1-4 year mortality rate reported to be 25 deaths per 1000 population in Upper Volta.****

*"Programme national des soins de santé primaires 'En Vue de l'instauration de la santé pour tous d'ici à l'an 2000." Ouagadougou: Ministère de la Santé Publique, Direction General de la Santé, July, 1979.

**The 1980 World Development Report 1980 (The World Bank, Washington, D.C. 1980) reports that in 1977, Upper Volta had only 1875 calories per capita available which was calculated to represent 79% of the requirement. This is consistent with an average per capita grain production of 200 kg (minus seeds and losses).

***"G.C. Bouyain et al. Rapport présenté par la délégation de la Haute Volta lors du séminaire sur la planification nutritionnelle multi-sectorielle". Ouagadougou: September, 1978.

****These mortality rates are likely to be low. The 1980 World Development Report (op.cit.) does not give a recent infant mortality rate but gives a 1978 1-4 year mortality rate of 32 per 1000 population.

The most recent nutrition survey with national statistics, was done in 1978 by the Organisme de Recherche Sur L'Alimentation et la Nutrition Africaines (O.R.A.N.A.); their sample was 1006 people from the departments of Volta Noire, Nord Est, Sahel and Centre Est.* This report used the Waterlow classifications of nutritional status recommended by the World Health Organization in which prevalence of both wasting (acute malnutrition defined as <80% of median weight for height) and stunting (chronic malnutrition defined as <90% of median height for age) are reported. Their results are summarized in Table 2.3. The survey found no significant difference in nutritional status by sex or by region among the four departments included in the study.

TABLE 2.3

Prevalence of wasting and stunting in four departments of Upper Volta in 1978, by age group

Age	Wasted ^a	Stunted	Normal	N
<1 year	35%	18%	67%	56
1-2 years	43%	3%	54%	49
3-6 years	10%	40%	50%	128
Total 0-6 years	10%	28%	52%	233
7-11 years	5%	28%	67%	177

^a Includes children who are wasted and stunted as well as those who are wasted only. For this reason, the prevalence of stunting is low in the 1-2 year group because most children were wasted as well as stunted.

Source: Page 24 of E. Benefice et.al.*

A survey undertaken in May-June 1975 in the Sahel region of Upper Volta also used the Waterlow classification.** This survey found a lower prevalence of wasting than the O.R.A.N.A. study, 9.2% of children 6 months to 6 years, but a higher prevalence of stunting, 35.1%. The Sahel survey found the rate of wasting to be highest in the 6 month to 2 year group; similarly, the O.R.A.N.A. study had found the highest rate of wasting in the 1-2 year age group.

*E. Benefice, A. Chevassaus, L. Francois, D. Epelbouin, A. Ndiaye. "Enquete nutritionnel en Haute Volta (Mars - Mai 1978)". Dakar: Organisme de Recherches sur L'Alimentation et la Nutrition Africaines.

**Center for Disease Control. "Protein/energy undernutrition surveys in the Sahel 1974 and 1975". Ann Arbor, Michigan: Nutrition Planning Information Service Document #43.

The report of a survey undertaken in 1978 by the Nutrition and Food Group of the Secretariat Permanent de Comité de Coordination du Développement Rural in the Kaya development region finds a higher prevalence of malnutrition than any other nutrition study done in Upper Volta that was available to the evaluation team.* The Kaya survey found that 33% of children 0-1, 48% of the children 1-2 years and 19% of the children 2-3 years were wasted.

Although there is some variation among the studies cited above, both in terms of nutrition status indicators used and region of the country where the study was done, a remarkably consistent picture emerges: about half the children 0-6 years old in Upper Volta must be considered to be malnourished.** Data from a CRS evaluation done in the early 1970's suggest that about 42% of new inscriptions into the preschool feeding centers (ages 0-35 months) were malnourished (defined as <80% of median weight for age)*** and similar data collected by the evaluation team for 1980 show that 47% of new inscriptions (7-36 months) were malnourished, so there seems to be little reason to believe that the natural course of development is bringing about any improvement in the rate of malnutrition in Upper Volta.

The rates of malnutrition among the children reached by both the CRS preschool and school feeding programs are similar to those reported in the few nutrition surveys that have been done in Upper Volta; which indicates that, far from serving a privileged group of children, the CRS programs are reaching a group of children with distressingly high levels of malnutrition. It is difficult to make inter-country comparisons on prevalence of malnutrition because different indicators are used in different studies and studies are often made of groups where high rates of malnutrition are anticipated. One of the few studies that has attempted to compare malnutrition rates throughout the developing world reports an average rate of 2.3% severely malnourished and 19% moderately malnourished among preschool children in developing countries.**** This same study reports that sub-Saharan Africa has the highest rates of malnutrition, with an average of 3.2% severe malnutrition and 25% moderate malnutrition which is still considerably less than the 8% severely malnourished and the 47% moderately malnourished found among new inscriptions in the CRS pre-school feeding program (See Section 3.4).

*Ministère du Développement Rural. "Rapport final du project: strategie pour l' alimentation." (TF-INT-210 (SWE) Ouagadougou: July 1980. This nutrition survey was undertaken in the ORD of Kaya as the pilot stage of an FAO sponsored nutrition planning project in Upper Volta. A subsequent survey has been completed in the ORD of Fada, but the results of this survey had not yet been released at the time of the evaluation team's visit in country.

**Most of the nutrition surveys summarized in this section were conducted in only part of Upper Volta. A national nutrition survey could be useful to clarify the extent of malnutrition in the country as a whole and perhaps to reveal regional differences in prevalence of malnutrition.

***Dr. Frederika Jacobs, CRS Field Bulletin, No. 21, Nairobi, 1974

****J.M. Bengoa and G. Donoso "Prevalence of protein-calorie malnutrition, 1973." PAG Bulletin, Vol IV, No.1.

Similarly high levels of preschool child malnutrition have been reported from Nepal* and other Sahelian countries in West Africa,** and higher levels have been reported from Bangladesh,*** which only serves to underscore the fact that the malnutrition rates in Upper Volta must be considered to be among the highest in the world.

2.3. History and Organization of the CRS/FFP Program in Upper Volta

Catholic Relief Services began working in Upper Volta in 1960 as a cooperating agency with Food for Peace. A small School Feeding program was launched at that time and subsequently Maternal and Child Health and Food for Work programs were introduced. From 1972 until the present, the total number of beneficiaries has almost tripled.

TABLE 2.4

Number of Beneficiaries, CRS FFP/Upper Volta, 1972-1980

Year ^a	Total	MCH Program	SF Program	FFW Program
1972	126,000	24,000	100,000	2,000
1973	147,000	35,000	100,000	12,000
1974	152,000	45,000	100,000	7,000
1975	147,000	45,000	90,000	12,000
1976	152,000	50,000	90,000	12,000
1977	217,000	70,000	135,000	12,000
1978	222,000	70,000	140,000	12,000
1979	284,000	90,000	182,000	12,000
1980 ^a	352,000	104,000	218,000	30,000

^aFiscal years 1972-79, Calendar year 1980.

*E.W. Brink, et al. "Nutritional status of children of Nepal, 1975." Bulletin of the World Health Organization, Vol. 54, pp. 311 - 318, 1976.

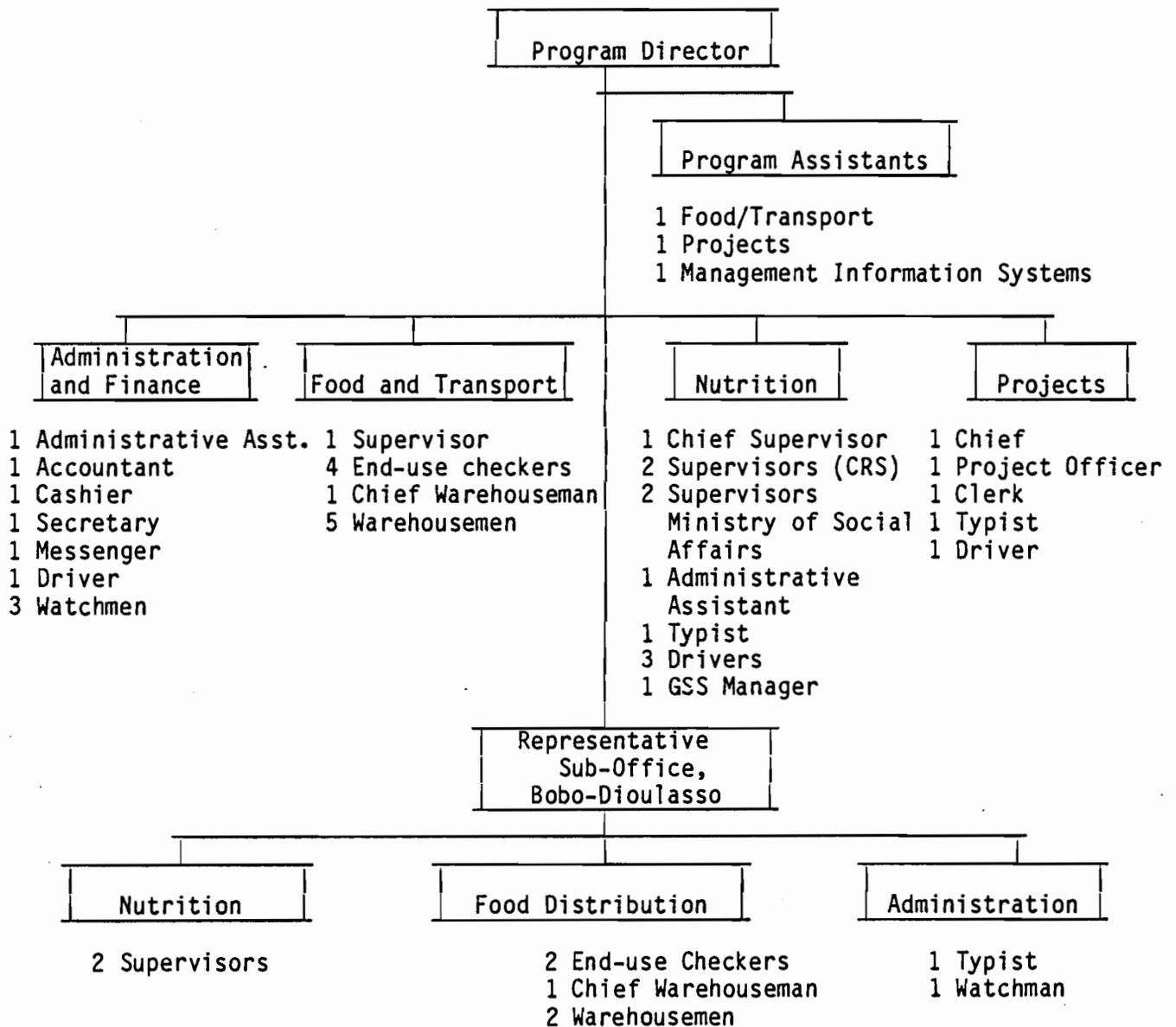
**J.C. Dillon et N. Lajoue "Rapport sur l'evaluation de la situation nutritionnelle des populations rurales du Sahel à la lumière des enquetes effectuées entre 1960 et 1979". Canada: International Development Research Series, January 1980.

***L. Chen, A Chowdhury and S. Huffman. "Anthropometric assessment of energy protein malnutrition and subsequent risk of mortality among pre-school aged children." American Journal of Clinical Nutrition, Vol. 33, No. 8, Aug. 1980.

In 1980, approximately 22,500 MT of food, valued at nearly \$18,000,000* (including the cost of commodities, overseas transport, and local expenditures) were imported through the Food for Peace program. CRS receives an Outreach Grant from AID (\$858,398 for FY '79-'81) for logistical and administrative support of the FFP program, enabling CRS to expand distribution and improve accountability. Sahel Generic Grant monies have been used to introduce the Growth Surveillance System into the MCH & SF programs.

There are 52 persons on the CRS staff, of whom 10 are expatriates. A new Director took over the program in September 1980 and the Nutrition office achieved a full complement of staff in October.

Figure 2.1 - Organization Chart - CRS, Upper Volta, January 1981



*See Table C.1

2.4. GOUV and USAID Objectives of the Food for Peace Program in Upper Volta

The new military government of Upper Volta, which came to power in late 1980, was still in the process of defining its programs and policies at the time of the evaluation mission. While some changes in specific areas are probable there is yet no evidence to suggest major divergences from the primary objectives contained in the 1977-81 National Plan*. These objectives include the improvement in living conditions for all the population; the achievement of self sufficiency in food; and a reduction in unemployment. With reference to the agricultural sector, principal emphasis is placed upon the replacement of food imports by increasing domestic food production and diversifying export crop production. Thus, food imports including food aid, are regarded as a temporary or transitional situation. However, there is some question as to how rapidly the country will be able to realize the objective of self sufficiency, as discussed in section 2.1.

All three major components of the CRS/FFP program in Upper Volta are consistent with the major thrust of government policy. The preschool and school feeding programs probably directly effect the lives of more citizens than any other single public sector program. The effect is generally perceived as being positive, despite the fact that definitive evidence of nutritional impact on the target groups of preschool children is lacking. In addition, the FFW program contributes directly to employment in the rural areas while helping to facilitate projects aimed at improving the economic status and/or quality of life in rural areas.

Differences in operational strategies between CRS and specific GOUV agencies were noted by the evaluation team and are discussed with reference to the specific program components in the following sections. The recommendations of the evaluation team include suggestions aimed at resolving these differences.

In Upper Volta the Title II food assistance program is in keeping with the developmental, nutritional and humanitarian objectives of PL 480. The U.S. food aid commitment to Upper Volta is a significant one. From 1972-78, it represented 38.6 percent of total food assistance in the country.** It is even more substantial in comparison with the total U.S. assistance package to Upper Volta. In FY 1980, the AID contributions to the CRS food distribution program of approximately \$15.5*** million was much greater than bilateral grants for that year.

Catholic Relief Services' preschool and school feeding programs are overwhelming the most expensive of AID's assistance in the health sector. The aim of the program is to alleviate malnutrition among 0-5 year old and primary school children. Some Food for Work projects, such as construction of schools, clinics and storage areas, also relate to these objectives. AID is proposing to assist

*This Plan was never formally accepted by the former government.

** See Table 2.2

*** These figures represent the U.S. dollar value of the PL 480 commodities, international transport, and AID's contribution to internal costs.

the Ministry of Public Health to establish a health planning unit and eventually expand the rural health care system. Nutrition planning and maternal and child health care will be an integral part of these activities. Until the planning unit is created, however, the CRS program remains the largest element of the AID Mission's health and nutrition program.

2.5. Criteria for Determining the Size and Scope of the Program

Until 1980, USAID/UV has routinely approved the CRS proposed program plans and thus the program has grown steadily over the last twenty years. However, recognizing the limitations on continuing increases in the commodities available to the program, the mission requested the team to make recommendations concerning the criteria for determining the size and scope of the program.

The team suggests that decisions on the size and scope of the entire FFP/UV program and of each of the components, be based upon consideration of the following four sets of criteria:

1) Aid priorities and the availability of commodities and necessary complementary financing:

Both Food for Peace and USAID/UV priorities must be considered so that the scope of the program fits within the country development strategy of the USAID Mission and is also consistent with the overall FFP strategy. Total program size depends on the availability of commodities for Upper Volta and also on the current and projected availability of adequate local financing, as well as supplementary monies from AID (such as Outreach Grant funds) that are necessary to support the effective distribution of those commodities.

2) Management capability of CRS, GOUV and non-governmental agencies involved in carrying out the program:

The size and composition of the program should be dependent upon the ability of the cooperating sponsor (CRS) and distributing agencies to manage the program effectively. The major indicators of management effectiveness are the efficiency of commodity distribution and the implementation of concomitant program elements. The total size, and the size of each of the components, could grow if there is a proven managerial capability that is able to expand, and should contract if not well administered.

3) Needs in Upper Volta and GOUV priorities:

Poverty and malnutrition are so pervasive in Upper Volta that the FFP program could grow almost indefinitely if need were the sole criterion. However, based on limitations coming out of the above two sets of criteria, it is desirable to scale relative needs and to target the most needy. The most obvious indicators of need for targeting are economic and nutritional status. Measures based upon economic status, e.g. income and/or food production, are impracticable: income and production statistics are very poor; there is considerable diversity within communities and therefore gross figures don't necessarily reflect the level of need; areas with relatively low production figures could be reasonably well off as a consequence of cash crop production

and/or off farm employment; there are significant annual and seasonal variations; and finally, these indicators are difficult and costly to validate and their use could lead to corruption and cheating.

Priority based upon nutritional status could (a) select the malnourished within the catchment area of preschool centers and among those attending participating schools and/or (b) target areas in which malnourishment is more prevalent. The first option is administratively difficult, could cause friction within communities, and might act as a disincentive to improving and maintaining nutritional status. The second option is more practical: a national nutrition study and the continuation of on-going regional nutrition surveys* could help to pinpoint communities in which there are relatively high rates of malnutrition.

4) Effectiveness of the program and potential developmental impact:

The composition of the FFP program and the size of each of the components should be related to measurable outcome indicators and to potential developmental impact. Change in nutritional status is an outcome indicator which is relatively easy and inexpensive to measure and is indicative of the achievement of the major program goal. Other indicators that will produce additional criteria for justifying current, larger, or smaller program levels are the effect of the program on: knowledge and behavioral change, especially in the preschool component; on attendance and cognitive ability in the SF component; and on community organization, productive activities and economic well-being in the FFW component. The potential for developmental impact is a subjective criterion. Allowing an option of judgment enables the program to experiment with approaches that could have a positive impact.

The team has attempted to apply these criteria to the evaluation. Following the analysis of our findings, we have tried to make recommendations that will assist the USAID/UV mission with making decisions on the size and scope of the program. In the individual sections of the report on the preschool, SF and FFW programs, we specify the conclusions and recommendations relating to each component. Following is an overview of our recommendations on the size and scope of the overall FFP/CRS program.

School feeding meets more of the criteria than either of the other programs. Our findings indicate that: the management of SF is efficient and could handle an enlarged program; the nutritional status of school children in UV is exceptionally poor by international standards and the GOUV is favorable to SF; and that SF is apparently having a positive effect on the nutritional status of participating children. We therefore, recommend that the program should continue to grow, given the availability of commodities.

FFW meets fewer of the criteria than either of the other programs. Our findings indicate that effective administration of the program would require significant increases in the staff and that improved management would not be

*These surveys are being undertaken by the Ministry of Rural Development.

cost effective. Moreover, while there is a clear need for the kinds of projects that are supported by FFW, there are no demonstrable effects which could be related directly to the availability of food. Therefore, we recommend termination of FFW.

Based upon the high rates of malnutrition among preschool children in Upper Volta, the need for the preschool program is great. Moreover, the potential for developmental impact is probably greatest in the preschool program, particularly if the community-oriented approach to education recommended by the team, is implemented, and successful. However, the team was unable to find that the current program has a significant impact on the nutritional status of children. CRS management of this program only recently reached full strength and it is therefore premature to plan expansion. Moreover, the team recommends a number of innovations that will require considerable effort from CRS', and the involved GOUV and non-governmental agencies' management. The team recommends that the preschool program not expand until there is evidence of a positive impact.

The team recommends for both the SF and the preschool program, that priority be given to establishing the program in communities in which there are relatively high rates of malnutrition. The team also recommends the possibility of phasing out food from the preschool centers in order to enable the program to reach new communities, assuming that there will always be a greater demand for establishing new centers than the availability of commodities and management resources could satisfy. The team makes other cost and commodity saving recommendations that would enable the program to expand with no increase in resources.

3. THE PRESCHOOL FEEDING PROGRAM (MCH)

3.1 Objectives

The goal of the MCH program according to the Food for Peace Handbook is "to improve the nutritional status of women of child bearing age and their young children." The CRS/UV briefing document states that "the underlying goal of the preschool program is to insure an adequate rate of growth in all enrolled children." It goes on to say, "In order to attain this goal, the program consists of three basic elements: (1) supplementary food aid, (2) growth surveillance of the child, and (3) education for the parents The growth surveillance not only helps determine the nutritional state of the children as a group and as individuals, but acts as an educational tool of primary importance in convincing the mother of the results of improved nutrition. Similarly, the food package must be of substantial nutritional impact, corresponding at minimum to the nutritional deficit of the child, as well as of tangible economic value to the family."

Maternal and child health services have been established in Upper Volta under the responsibility of several different ministries as well as by church missions and other non governmental agencies. The ministries that currently have responsibility for some MCH centers are Health, Social Affairs and Rural Development. The Department of Public Health (of the MOH) has recently distributed a proposal (based on the findings of two interministerial commissions) to expand and coordinate MCH services under a special "Service de Santé Maternelle et Infantile et de la Nutrition" within the Department of Public Health.*

In the past a majority of MCH centers in Upper Volta have distributed food aid, including many under the responsibility of the MOH.** However, there is considerable concern within the MOH that the food distribution activities at MCH centers cause the educational activities and other preventive health measures to receive relatively little attention. The recent Department of Public Health document on MCH services specifically proposes that food aid be distributed at locations separate from the MCH centers and that consideration should be given to the targeting of food aid to needy families, critical periods, the "soudure", and as emergency aid.

Representatives from the Ministry of Social Affairs with whom the team met, supported food distribution within the Ministry's local centers. In fact, examples of rapid diminution of attendance following the cessation of food distribution were described. The Ministry's commitment to the program is evidence by the secondment of two Food and Nutrition Supervisors from the Ministry of Social Affairs to CRS/UV.

Representatives from the Ministry of Rural Development were also supportive of food distribution within centers under their auspices. The animatrices working in those centers were trained in rural development by the Ministry.

* "Project de programme de la santé maternelle et infantile," Ougadougou: Direction de la Santé Publique, Ministère de la Santé, 1980.

** A 1975 study by Mme Atjas, a consultant to the World Health Organization, found that 86% of the 218 MCH centers surveyed were distributing food aid.

3.2 Organization and Management

3.2.1. Coverage

The preschool feeding program currently has approximately 107,000 beneficiaries -- 104,000 children and 3,000 mothers. There are 113 primary centers and more than 300 mobile and adjunct centers. In addition, almost half of the centers visited reported that some of their participants come from other villages between 5 and 30 kilometers distant. Thus well over 400 villages are reached by the program.

Approximately 8.9% of Voltaic children under age 5 are participants.

TABLE 3.1

Participation of Children under 5, by Medical Sector*

<u>Medical Sectors</u>	<u>Sector Population</u>	<u>% of National Population</u>	<u>Population Under 5</u>	<u>Parti- pants Under 5</u>	<u>% Coverage of children Under 5</u>
1. Ouagadougou. (Ctr.)	1,020,000	16.8	188,000	30,772	16.4
2. Fada (Est)	436,000	7.2	83,000	9,274	11.2
3. Sud-Ouest	383,000	6.3	71,000	2,938	4.1
4. Ouahigouya (Nord)	568,000	9.4	112,000	1,248	1.1
5. Centre-Ouest	845,000	14.0	167,000	10,292	6.2
6. Volta Noire	681,000	11.3	127,000	11,667	9.2
7. Hauts Bassinst	625,000	10.3	118,000	11,583	9.8
8. Centre-Nord	677,000	11.2	126,000	20,179	16.0
9. Dori (Sahel)	379,000	6.3	63,000	504	.8
10. Centre-Est	434,000	7.2	81,000	1,955	2.4
TOTAL	6,640,000	100.0	1,134,000	100,412	8.9

* Note: all figures as of December 1979

† Hauts Bassins includes the newly created Comoe department (Banfora) in this table.

3.2.2 Program Costs

The preschool feeding program cost an estimated \$5,296,000 in FY 80 or \$50.92 per participant.* This is high relative to other programs primarily because of the high international transport costs which averaged \$278 per metric ton between East Coast ports and Bobo-Dioulasso/Ouagadougou. The costs of the commodities and the international transport totaled \$4,347,000 or 82% of the total figure. Internal costs (including the costs of internal transport, storage, as well as the staff time of CRS and MCH center personnel) totaled \$949,000, of which 31% represented contributions from participants (mothers of children participating in the program). A further 45% was contributed by various GOUV institutions, notably the Ministry of Finance which assists with transport and warehousing charges. CRS and local religious groups contribute an estimated 10% and 6% respectively, while the remaining 8% comes in approximately equal amounts from the Generic Grant for the Sahel and the Title II Outreach Grant. (See Appendix C for detailed budgetary breakdown).

3.2.3. Control and Supervision

Requests to participate in the program are initiated by local authorities and/or organizations and approved on the basis of administrative criteria: sufficient personnel, adequate physical setup for the activities and warehousing, no duplication or conflict with other services in the area, and approval in writing from the appropriate public and/or private sector authorities. The centers are controlled and managed by the responsible agency and receive the commodities and technical support from CRS. A number of malfunctioning centers have been dropped by CRS (and others have voluntarily withdrawn from the program, usually because they do not believe in food supplementation).

TABLE 3.2

Organizational Responsibility for Preschool Centers, December 1979

Ministry of Health	26
Ministry of Social Affairs	19
Ministry of Rural Development	9
Missions	24
Private Associations (mostly Village Groups)	<u>21</u>
TOTAL	99

* This figure is based on tonnage figures derived from number of participants multiplied by the annual ration.

CRS supervisory assistance includes: on-site training of center personnel prior to introduction of the program, continual monitoring to ensure the quality of the nutrition education, weighing, and maintenance of the growth surveillance system, and the accountability of the commodities. CRS supervisory support observed by the team was firm but constructive. More than half of the centers visited reported that CRS staff visit at least four to six times a year. Only two reported very rare visits, and these were in regions in which there had been no supervisory staff until recently. As many centers are inaccessible during the rainy season, CRS visits must be concentrated in the dry period.

3.2.4. Organization and Logistics

The largest center visited had a total of 3,100 beneficiaries and the smallest 50. Some centers have sessions five days a week, others only have one session per month. The centers reported from about 40 to 200 participants per session. About half had more than 80 per session and half had fewer than 60 per session. The number of staff ("animatrices"), excluding laborers (who were hired in some centers to assist with the distribution of rations), ranged from 1-6, with more than three-fourths of the centers having 30 or fewer participants per staff.

Most of the sessions visited followed more or less the same routine. First, the individual children were weighed and the mothers paid the fee (50 CFA), they then attended a lecture ("causerie"), fed their children from the large pot of food prepared for the cooking demonstration ("grande bouillie"), and the mothers collected their food rations. There was some variation in the order of these activities but the distribution of food was always after the weighing and the lecture. A few centers demonstrated the cooking of an individual ration ("petite bouillie") in addition to the large one. In most centers, the mothers themselves had responsibility for distributing the rations but in some it was done for them.

The efficiency of the centers appeared to depend more on the managerial capability of the staff than on the number of participants. A few centers had too few staff for the number of mothers attending but some with adequate staff were poorly organized and slow. Most of the centers divided the mothers into subgroups of around 20-25 -- a good number for the educational activities and the food distribution.

All of the centers carried out all of the prescribed activities although there was great variation in both competence and dedication. All of the centers had staff who knew how to weigh the children but only a few justified the scale between children. Few centers systematically required the children to totally undress (but most of the clothing was lightweight).

Almost one-fourth of the centers visited reported some irregularity in deliveries of the rations but the Outreach Grant has resulted in more efficient transport arrangements and improved reliability of deliveries. Moreover, it is anticipated that, with the full complement of supervisors, there will be better oversight of the logistics. The supervisors are responsible for reviewing monthly center reports on the numbers of participants and stock inventories and informing the commodity control division when stocks are needed. Centers within 100 kilometers of Ouagadougou or Bobo-Dioulasso have total responsibility for the transport (which is paid for by participant contributions) and are accountable for the commodities once they leave the warehouse. Transport is arranged by CRS for outlying centers and the Outreach Grant covers the costs above 100 kilometers.

Several centers commented that the new packaging of milk powder in cartons is more secure than the old sacks, and greatly simplifies the distribution. Most centers reported frequently receiving a few oil cans per shipment that were perforated or otherwise damaged. A few reported infested maize and milk powder hardened by the humidity.

3.2.5. Selection of Beneficiaries

CRS guidelines for the acceptance and graduation of beneficiaries are somewhat flexible. Children may participate from 0 until 5 years of age but centers that are too crowded to accept all applicants can enroll children at six months and graduate them at three years. The conditions of enrollment are that a mother must agree to bring her child monthly to the center and to participate in all the activities of the session. The child must be in the program for three months before a growth chart is given. Stringent contractual terms are not required of mothers at the outset because CRS believes that the cultural tendency to try and please would make it a hollow exercise. However, the chart is supposed to be used as the tool for monitoring the child's growth and, by implication, the mother's compliance with good child feeding practices. CRS is beginning to target exceptional seasonal and regional requirements by providing temporary rations to mothers of children in especially needy areas.

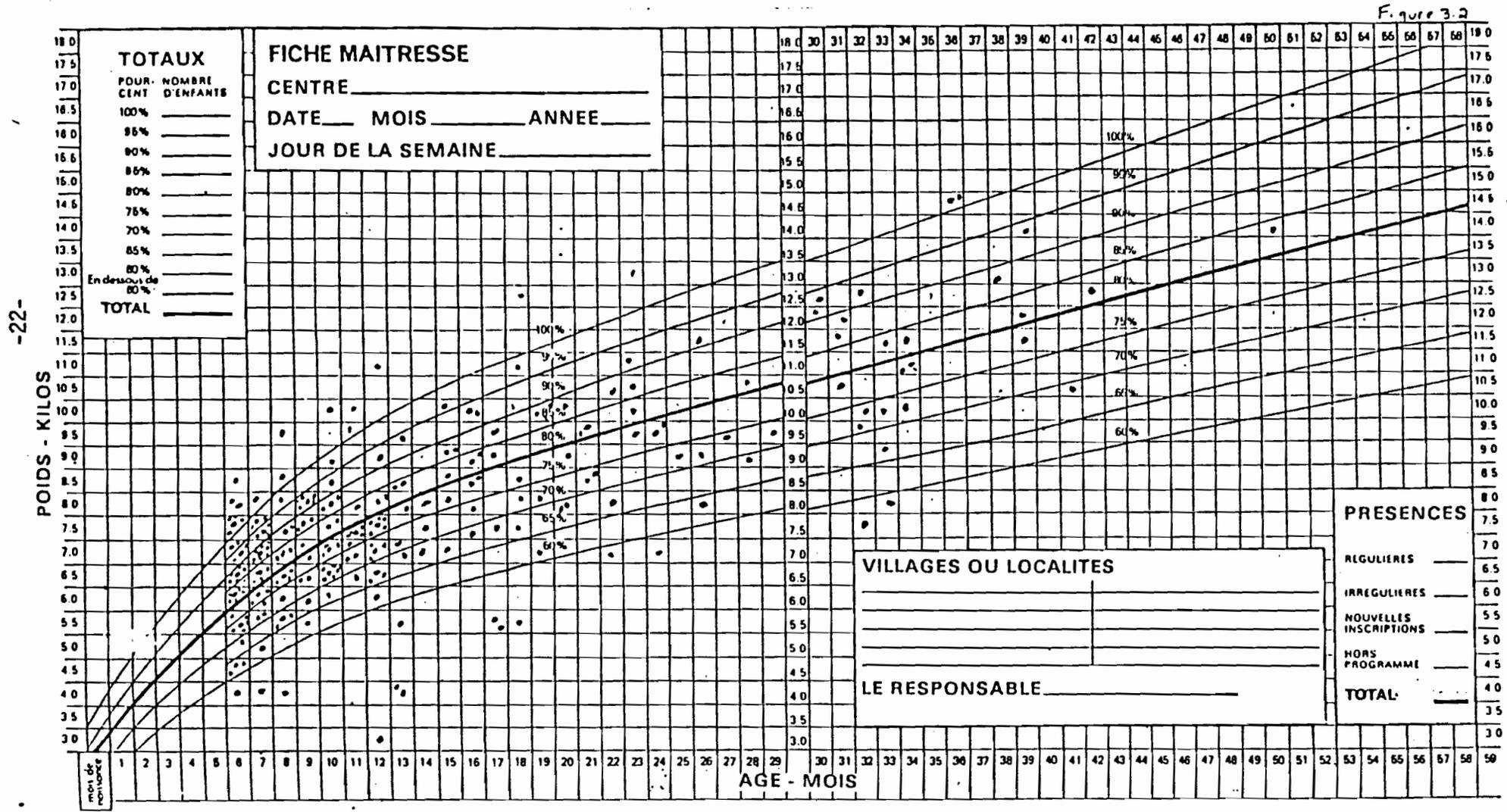
Among the centers visited, most enrolled children from 6 months to three years and graduated them at age 5. Some were more restrictive and required, for example, that the children be born at a nearby maternity; others accepted all children from 0 to age 5 (although there is a tendency to accept only the more malnourished among older children). About 20% said they graduated children at age 3, and another 20% mentioned weight achievement (15 kg.) as one of the criteria. Regular attendance* was mentioned by about half of the center staff as the major condition of acceptance or continuation in the program. A few said the mother should agree to take good care of her child. The enrollments that were observed during clinic visits entailed very little, if any, exchange between the mother and the animatrice except to ascertain the child's age.

3.2.6. Growth Surveillance System (GSS)

CRS has developed a growth surveillance system that is being used in most of the African countries in which CRS has a Food and Nutrition Program. The system involves an individual growth card and a master chart (see Figures 3.1 and 3.2). As used in Upper Volta, the animatrice first weighs the child and records

*Our analysis of aggregated center data indicated considerable fluctuation in attendance (see Appendix D, Figures D.1 - D.5). We are unable to determine individual attendance patterns from these data but they could be indicative of irregularity. However, in the mothers' interviews, 58% reported no special problems inhibiting attendance. The two major reasons given for irregularity were poor health of the mother or child and funerals. Others reported visits away from home, work in the field, or inaccessibility of the center during the rainy season. Only two mothers said lack of money occasionally kept them away.

FIGURE 3.2 THE MASTER CHART



the child's age and weight on the individual card. Then the child's weight for age is plotted on the master chart and from the master chart the animatrice determines in which weight for age percentile the child falls. This percentile is then marked on the individual's growth chart.

Implementation of the GSS began in November 1978. The GSS monitors child growth, is used as an educational tool to teach mothers the relationship between their children's growth and good nutrition, and for reporting service data. Presently 89 out of the 113 centers use both the master and individual growth surveillance charts. In some centers, only the master charts have been introduced because CRS believed they should have practice using them before switching to the new individual charts (from the individual charts that were being used). CRS anticipates that the GSS will be fully implemented by the end of 1981.

The system was variously applied: mistakes were observed in weighing and in the recording of weights and ages on the charts. For example, incorrect weights were taken when the scale was read improperly, the child was not centered, a rag underneath the scale prevented it from balancing properly, or the subtraction of an older child's weight was inaccurate when a baby was held on the scale. Ages were sometimes calculated incorrectly when a child had skipped a month or the clinic only operated every five or six weeks. Another fault frequently observed was that new registrants were rarely marked with a special notation on the master charts as they are supposed to be. Improvement of the accuracy of weighing and recording on individual and master charts is a high priority of CRS supervisors and they were observed working on this problem with the staff.

Most of the centers had, as instructed, eliminated the old weight registers when the GSS was introduced. A few continue to routinely maintain the daily log causing extra work and no apparent advantage to center management. Under the GSS a register of new entrants should still be kept and most of the centers visited had one. However, in most centers they were not currently recording the weights in the new entrants register at the time of registration.

In some of the centers operated by the Ministry of Health, both the CRS individual growth surveillance chart and the growth chart officially sanctioned by the Ministry are used. The CRS chart records percent of standard growth for age and must be used in conjunction with the master chart from which the percentages are ascertained. The master chart records attendance according to each individual's status, and thus provides aggregated service data as well as an overview of nutrition status for that day. The individual MOH child card records weight for age and is not used in conjunction with the recording and reporting of service statistics. (See Figures 3.1 and 3.2)

The growth surveillance system is a fairly simple basic information system which produces service data for program management and planning, and individual information for client education and management, while requiring a minimum of center staff time. The master chart enables the user to record directly on the reporting form. It provides information on: participation (and thus center activity), the nutritional status and age range of participants, seasonal variations in attendance and nutritional status, and some indications of the accuracy with which center staff are recording the weights and ages of children.

The master chart provides immediate feedback to center staff because the data from each session are aggregated graphically. If interested in following trends, the staff can maintain their own records of the daily totals. They then submit the original master charts to CRS, thus eliminating the laborious collating and copying of service data that would be required of field staff if registers were used.

The individual growth chart cards are flexible in that they can be used for a range of age groups and with a variety of nutrition status indicators. Each vertical column is independent of the others so that if a mistake in age attribution was made during a past visit, it can be corrected without changing the other columns or if a child's attendance is irregular, it doesn't require the center worker to skip columns accordingly. Therefore, while past mistakes affect the trend line, they don't affect the current assessment of the child's weight for age. The chart has internal checks on growth and age: if used properly, weight, as well as percent of standard growth is recorded, and date of birth and date of visit, as well as age in months are recorded.

Although the GSS has many positive features, it also has drawbacks. It is difficult and time consuming for minimally educated workers to learn to use. The recording of information is a multi-step process, requiring the transposition of information from one place to another. Changes in weight-for-age status are not apparent on the graph if a child falls in the same percentile as he did at the previous visit. The individual dots on the master chart are difficult to read and tally. Moreover, the team found low rates of understanding by the mothers of their children's charts in comparison with the rates found in studies* of the so-called Road to Health type card (a variation of which is used currently by the MOH in Upper Volta). (However, this could have been due to poorer education of the mothers by the center staff, or it could have been due to differences in the way mothers' understanding of the charts was probed and analysed.)

3.2.7. Access to Health Services

Although we did not survey the health status of children in the program, the animatrices who were interviewed reported the diseases they thought were most widespread: they all mentioned diarrhea, almost two-thirds mentioned malaria, respiratory infections, and measles, and approximately one-fourth mentioned whooping cough, eye infections and meningitis. Also mentioned were: parasites, colic, smallpox, onchocerciasis, polio, loss of appetite, and kwashiorkor. Evidence from numerous studies indicates that infectious diseases have a significant negative effect on the nutritional status of children, especially diarrhea, measles and malaria.

*See Marcia Griffiths, "Growth Monitoring of Preschool Children", American Public Health Association, 1981; N. Pielemeier, E. Jones, S. Munger, "Use of the Child's Growth Chart as an Educational Tool", Synectics Corp., 1978 (report to Office of Nutrition, AID); and Tara Gopaldas, et al., Project Poshak, Vol.I, CARE, India, 1975.

Among the clinics visited, 40% were attached to or within 5 kilometers of a dispensary, another 13% were within ten kilometers of one, and the others were as much as 25 kilometers from a health center. Many of the animatrices said that the dispensaries do not have medications and that patients usually receive a prescription which they fill only if they have money. Nivaquine is routinely distributed through all the centers during the rainy season. In some centers a few basic medicines are available, notably aspirin and Ganidan (for diarrhea). Vaccinations against diphtheria, tetanus, whooping cough, polio, and measles are given sporadically by mobile vaccination teams, sometimes at the preschool centers or nearby dispensaries, sometimes elsewhere in the community.

3.3 THE RATION

3.3.1. Nutritional Value

The ration provided to each participant in the preschool feeding program consists of 2 kg of enriched corn meal*, 2 kg. of non fat dried milk powder and 1 liter of soybean oil. The oil ration was recently increased from half a liter to a liter (distributed beginning April through June of 1980). Table 3.3 provides an analysis of the current ration in terms of the energy and protein requirements of infants and young children. Both the FAO/WHO requirements and the requirements established by the Ministry of Health of Upper Volta have been used to calculate the percent of requirements met by the ration. Using either set of requirements, the ration must be considered generous. Using the FAO/WHO requirements it provides, for a child under one year, 94% of energy requirements and 230% of protein requirements; for a child 1 to 3 years, it provides 57% of energy requirements and 202% of protein requirements. The protein requirements set by the MOH are much higher, presumably because they are based on the need for more protein when the protein quality is poor as in a diet based on cereals, roots and tubers. In the case of the ration, since most of the protein is provided by the milk, the FAO/WHO requirements are probably more appropriate. Either way, the ration provides about two thirds of a target child's energy needs and three quarters of his or her protein needs. This is quite large in comparison with other supplementary feeding programs. Beaton and Ghassemi review 20 supplementary feeding programs that provided a take-home ration for children 0-5 years and found that they provided an average of 380 calories and 18 grams of protein.** Among the

*Until January 1981 the corn meal distributed in Upper Volta has been enriched with soy flour. At the time of the team's visit, CRS had received a shipment of non fortified corn meal, which they will be distributing in the future. The substitution of non fortified corn meal will only slightly reduce the energy and protein value of the ration.

**See Table 4 on page 18 of "Supplementary Feeding Programs for Young Children in Developing Countries" prepared for UNICEF and the UN ACC Sub-Committee on Nutrition by G.H. Beaton and H. Ghassemi, October, 1979.

TABLE 3.3

ANALYSIS OF THE PRESCHOOL RATION

Commodity	Ration/ child mth.	Ration/ day (30 days)	Calories/ 100g	Total Calories/ day	% Daily ^a Caloric requirement	Protein/ 100g	Total Protein/ day (g)	% Daily ^b Protein requirement		
					less than 1 yr.	1-3 yrs.		less than 1 yr.		
Powdered milk	2 K	66 g	363	240	29 (21) ^c	18 (20)	36	24	169 (105)	148 (56)
Soy fortified maize	2 K	66 g	392	259	32 (23)	19 (22)	13	9	61 (38)	54 (20)
Soy oil	1 L	31 g	884	271	33 (24)	20 (23)	-	-	-	-
Total				770	94 (69)	57 (65)		33	236 (150)	206 (78)

^a Nutritional needs - FAO/WHO : less than 1 year 820 calories/day 1-3 yrs. 1360 calories/day
 Nutritional needs - Upper Volta : " " 1120 " " 1190

^b Nutritional needs - FAO/WHO : " 14 g/day " 16 g/day
 Nutritional needs - Upper Volta : " 22 " 42 "

^c Percent of Upper Volta requirements in parentheses.

projects they reviewed, which were from Asia, Africa and Latin American, there were none that provided as large a caloric supplement and only one that provided as much protein. The Morocco program ration provided approximately 40% of energy needs and 70% of protein needs; however, in Morocco each family received three rations.*

3.3.2. Economic Value

There is little doubt that the ration represents a considerable income supplement to the recipient families. The economic value of the ration can be viewed from two perspectives: first, the value calculated in terms of what a person would have to pay for an equivalent amount food of essentially identical quality. This figure represents the "opportunity cost" of the ration or what value would be received if the ration were converted to cash. Alternatively, the ration's value can be calculated on the basis of what a person would have to pay for a similar quantity of food using the cheaper locally available substitutes that serve a similar or identical purpose in the diets. If mothers use the ration as a substitute for buying cheaper foods then the second approach is a more correct approximation of the value of the ration in the minds of recipients.

Values for the ration using the two approaches are given below:

	Market value of identical commodities	Market value of lower cost substitutes
	(\$ per month)	
corn meal (2kg)	.72	.72
milk powder (2kg)	8.00 ^a	
soumbala		**b
vegetable oil 1 liter	1.57	
karite butter		**b
total	<u>10.29</u>	

a Imported powder milk in 1 kg tins sells for approximately \$8 in grocery stores in Ougadougou. A figure of \$4 per kilo is thus probably a conservative estimate of the value of the milk powder in the Voltaic Market.

b Negligible value, often gathered growing wild and prepared at home (although the gathering and preparation require a lot of time).

Examination of the results reveals a predictable major difference in the two sets of estimates. The market value of close equivalents is \$10.39 per month, or over \$123 a year, which is a significant amount when compared to an annual

*Judith W. Gilmore et al, Morocco: Food Aid and Nutrition Education, Project Impact Evaluation No. 8, AID, August 1980.

estimated per capita income figure of \$160.* The value is dominated by the milk powder. The low cost substitute ration includes karite butter, which is the most commonly used fat (although oil is preferred), and soumbala, the most common of a number of foods mothers would normally use to provide the protein requirement.**

The importance of viewing the preschool feeding program ration as an economic supplement to the family was emphasized both by CRS documents provided before the team went to Upper Volta and by discussions with CRS staff in Upper Volta. The CRS philosophy, as we understand it, is that only if the ration provided is of sufficient economic value will the families be able and/or willing to feed the child enough to allow for adequate growth. In order to evaluate the ration from this viewpoint, two questions need to be answered.

- 1) How economically valuable is the ration to the recipient families? and
- 2) What effect is the ration having on household consumption or expenditures?

The dollar value of the ration, calculated in terms of what it would cost to buy the commodities in Upper Volta is considerable. The impression of the discussion with local officials and representatives of other private voluntary groups, is that the food ration has been a major motivation for attendance at the preschool center and when, for some reason, food distribution ceased, mothers no longer found it worthwhile to come to the preschool centers. This provides a partial answer to the first question, but the second question is really at the heart of the CRS approach in sub Saharan Africa. Based on interviews with mothers and interviews with the staff at the preschool feeding centers, the team concludes that the ration is primarily consumed by the recipient family. We found no suggestion that families regularly sell the ration or use it to pay off debts. However, in order to determine whether the ration primarily supplements or substitutes for the normal diet and how the ration affects intrahousehold food distribution, a detailed dietary survey would be required. Ideally such a survey would be done by actually visiting homes of both recipient and non-recipient families at several times during the course of the year to take into consideration the important seasonal variations in food availability that exist in Upper Volta. To determine the effect of the ration on aspects of household expenditure beyond food, a more extensive economic study of sample households would be required.

It is clear, both from data gathered during the evaluation and from the records of CRS, that a substantial number of children remain malnourished even after several months or years of receiving the preschool ration. However, this sheds little light on the economic value of the ration to the family. It may be that given the poverty in Upper Volta, the ration is still not valuable enough.

*The World Development Report 1980, The World Bank, Washington, D.C., 1980.

**See Table 3.7

enough. It might be that the ration is large enough but the families do not understand or are unwilling to adequately feed the target child. It might be that the child is being fed adequately but is so burdened by disease that he/she remains malnourished. In order to assess the importance of the ration as an economic supplement, evaluation of direct program outcomes such as child nutritional status or maternal nutritional knowledge is insufficient. CRS has essentially proposed a hypothesis that the ration must be economically valuable to the household in order to ensure a nutritional impact; this hypothesis needs to be tested by a careful economic and anthropological study at the household level.

3.4 Measures of Effectiveness

3.4.1. Nutrition and Health Knowledge

a) Education and Training Program

One of the key elements of the Catholic Relief Services' philosophy and approach to preschool feeding is that education, in tandem with food assistance for nutritionally vulnerable or economically deprived children, will bring about changes in health care and nutritional practices in families. While food provides immediate economic and nutritional benefits, it is the educational component which makes the program self-sustaining over the longer term. For nutrition and health education to be effective, it must reflect an understanding of the needs and constraints of the existing situation.

The education is delivered through several mechanisms. In the centers, food demonstrations and group lectures teach mothers how to improve their children's nutrition and health. Both donated commodities and local nutrition foods are prepared and discussed. The nutritional surveillance of the child, through monthly weighings, growth charts, and individual discussion with the mother, is CRS's primary educational tool in convincing the mother of the relationship between improved food practices, health, and the physical growth of her child. In one center visited, village leaders - both male and female - were trained to carry out this education at the community level.

Although lacking a standard curriculum or an official training program for health and nutrition, CRS has taken a leading role in the development of educational materials and in training. CRS supplies all the participating centers with two basic handbooks: Hygiene and Childhood Diseases; and Food Child Development. These manuals consist of instructions and basic information that the center staff are to assimilate and adapt to local needs. The Food and Nutrition staff is currently working on a flannelograph series and a booklet of prepared talks: the flannelograph series* describes through images the linkage between food intake and the age and energy level of the child; the booklet is designed for the particular health and nutrition situation of

*Other flannelograph aides are available through GRAP (Groupe d'Etudes d'Appui d'Autopromotion Paysan).

Upper Volta, presenting technical information in a way that will stimulate interest and enthusiasm. CRS has also organized its own training sessions for some center personnel and has financed the attendance of others at CESA0 (Centre d'Etudes Economiques et Sociales d'Afrique de l'Ouest).

Despite these efforts, CRS does not consider itself technically and financially equipped to develop and implement a full-fledged educational program without sharing this responsibility with the other participating ministries. The Ministries of Health, Social Affairs, and Rural Development have their own training activities for center staff, each focusing on a particular area of specialization. In addition, each of these Ministries has developed courses for rural animatrices, ranging from 1 month to 2 years, comprising the following aspects: nutrition and health education, literacy, home economics (sewing and cooking), and income-producing activities, such as basketweaving or poultry raising. These training activities are not sufficiently coordinated; attempts to bring about collaboration in the past have not materialized.

b) Knowledge and Practices

Our own observations of the education activities at the centers revealed a wide spectrum of health and nutrition topics and varying degrees of pedagogical skill. The subjects presented during our visits included:

- treatment of diarrhea
- care of eye infections
- interpretation of growth charts
- colds and coughs
- cold weather: bathing and clothing of children
- vaccinations
- conception and pregnancy
- clean water
- treatment of burns
- how to cut the umbilical cord
- three food groups
- preparation of vegetables
- use of eggs
- dietary practices

We found a relationship between the level and quality of training of the center staff and the capability of the animatrice to motivate mothers' participation and learning, both on a one-to-one basis and in a group setting. In general, those animatrices who had received in-service or special training or had advanced education were most adept at eliciting group participation.

We attempted to assess the knowledge of the center animatrices and program participants in those substantive areas which were emphasized in CRS' programming approach. During our center visits, we interviewed 28 animatrices and 73 mothers.* Whenever possible, we selected animatrices who had been recruited

*Due to the small sample and limited time for pre-testing of questionnaires and training of interviewers, the team acknowledges that the results may be inconclusive.

from the local community rather than the administrators of the centers. We intended to interview the tenth and fifteenth mother in each group, but this was not always feasible. We asked both animatrices and mothers the same set of questions concerning age of food supplementation, local equivalents of the PL 480 commodities, home remedies for diarrhea, and understanding of the growth charts. Refer to Appendix B (questions 6, 7, 8 and 12 of the animatrice interview form) and Appendix B (items 19, 21, 23, 24 of the participant questionnaire).

Our findings are presented on Table 3.4.

One of the major strengths of the CRS program is its emphasis on local foods and remedies that are readily available and affordable. Despite this focus, only 36 percent of the animatrices and 4 percent of the mothers in the program understood fully the local calorie, fat and protein equivalents of all three PL 480 commodities. Almost all the animatrices and the mothers (93 percent and 99 percent respectively) mentioned sorghum and millet flour as substitutes for corn meal, a fairly obvious equivalent. Likewise, 85 percent of the mothers identified karite butter or peanut oil as substitutes for vegetable oil, again easily recognizable equivalents. However, only 54 percent of the animatrices included an oil equivalent in their responses.* Non-fat dried milk posed a more difficult problem since there is no ready substitute that resembles this product, except for fresh or concentrated milk. Several mothers replied that a sugar and flour combination or sugar and dried fish could simulate powdered milk. Forty-seven percent of mothers were able to name a milk product as a substitute. But only 4 percent of mothers and 57 percent of the animatrices could identify a non-milk animal or vegetable protein equivalent.**

With regard to treatment of diarrhea, all the animatrices knew appropriate home cures; 46 percent also mentioned medical treatment. In contrast, only 47 percent of the mothers mentioned rice water, "pain de singe" (from the pod of the baobab tree), or infusions, with 42 percent replying that they would also seek medical care.*** Twelve percent responded that they would give their children enemas, and 23 percent referred to leaves or tree roots without giving any indication of preparation or use.

*This could be explained by the way the question was asked the animatrices. They were requested to name all the equivalents at one time rather than the specific equivalents for each of the PL 480 commodities.

**In trying to propose local substitutes for the PL480 commodities, the mothers may have been thinking in terms of what they normally use for a bouillie, hence the reference to flour and sugar.

***Some mothers gave more than one answer.

TABLE 3.4

KNOWLEDGE OF MOTHERS/ANIMATRICES

Mothers (n=73)			Animatrices (n=28)		
<u>Age of Introduction of Supplementary Foods</u>					
3-7 months	N 58	% (80)	3-7 months	N 28	% (100)
1 year or more	9	(12)			
No response	6	(8)			
<u>Local Equivalents</u>					
Knew equivalent for: corn meal		N	%	Knew equivalent for: corn meal	
yes	72	(99)	yes	26	(93)
No response	1	(1)	no	2	(7)
oil				oil	
yes	62	(85)	yes	15	(54)
no	10	(14)	no	13	(46)
No response	1	(1)			
Non-fat Dried Milk				Non-fat Dried Milk	
yes	3	(4)	yes	16	(57)
Milk only	34	(47)*	Milk only	4	(14)*
no	35	(48)	no	8	(29)
No response	1	(1)			
<u>Treatment for Diarrhea</u>					
Knew acceptable home cures		N	%	Knew home cures	
	34	(47)		28	(100)
Would seek medical treatment				Recommended medical treatment	
	31	(42)		13	(46)
Leaves	17	(23)			
Incorrect response (enemas)	9	(12)			
No response	2	(3)			
<u>Growth Charts</u>					
Could read growth charts		N	%		
	33	(45)			
Did not understand growth charts					
	28	(38)			
No response	12	(16)			

* We believed that this response did not adequately indicate a knowledge of protein equivalents because it appeared that the association was simply milk with milk.

The growth charts, as described earlier, are a teaching device with two major purposes: to help the program participants understand visually how their children are progressing on a monthly basis and to demonstrate, conceptually, the relationship between a child's development and food intake. The role of the animatrice is crucial to bringing about this understanding, and few of the centers were using the growth chart effectively. In particular, we did not see the growth charts being used to identify severely malnourished children for provision of nutrition rehabilitation. At many centers, the animatrices made no comment concerning a child who was 60% or less. At others, they would ask the mother if the child had been ill or suggest that she feed her child more, but no specific nutrition rehabilitation was offered or required. During the interviews, fifteen of the animatrices were asked what they did for a child who showed continuing loss of weight. Twelve said they recommended feeding enriched food, seven recommended that the mother seek some kind of medical treatment and nine said they asked about the cause of the weight loss. Four said they gave out special baby cereal, "rizine" and three said they gave vitamins; only one animatrice said that home visits were made if the weight loss continued.

As seen in Table 3.4, only 45 percent of the mothers interviewed could read the growth charts correctly or knew if their child had gained or lost weight that month. An even lower percentage recognized food as an important factor in their child's growth. (The way the question was asked suggests an inconclusiveness about the responses.) On the other hand, a high percentage of the animatrices could explain the relationship between growth and diet and about half between growth and health.

A prerequisite for adequate nutrition is knowing at what age supplementary foods should be introduced; eighty percent of the mothers and 100 percent of the animatrices replied correctly to this question. Despite these responses, our diet survey did not show that young children were being adequately fed even when protein foods were available in the household. In our small sample of mothers, we found no direct relationship between the knowledge of mothers and the nutritional status of children, nor did knowledge of mothers appear to vary with length of time in the program. In those cases where knowledge appeared to be high, we were not convinced that this learning was being applied to child feeding in the home, suggesting that other constraints at the household level need to be addressed.

Time budget data from Zimtenga in the Kongoussi Zone of Upper Volta show that women are overworked, so much so that out of 14 hours a day they spend an average of only 18 minutes on child rearing.* The introduction of labor-saving technology had a positive effect on nutrition and health: mechanical grain mills enabled women to prepare evening meals that they normally would have neglected, and the construction of easily accessible water wells encouraged the adoption of health-related advice. Women in project villages

*Brenda McSweeney and Marion Freedman, "Lack of time as an Obstacle to Women's Education: The Case of Upper Volta," Comparative Education Review, Vol.24 No.2, Part 2, June 1980, pp. 124-39.

in which the technologies had been introduced did participate in education activities in significantly greater numbers than women in control villages. Health-related activities were most popular because they were seen as a means of improving the quality of life.

The mothers in the CRS preschool program are similar to the women in Zimtenga. They work hard during the rainy season, cultivating not only their own parcel of land but their husbands' fields as well. This, of course, is in addition to their other functions of fetching water and firewood, food processing and preservation, and daily household chores. During the dry season, they barely eke out a subsistence living from petty trading of firewood, clothes, beer, handicrafts or prepared food. They cook for an average of 10 persons on a daily basis, including 4 children and 6 adults.* In the household, the husband controls the purse strings and the mother-in-law wields her authority and advice. Husbands are not always willing to provide extra money for the protein enrichments that go into the sauce for the basic staple, to** And mothers-in-law often impose their traditional beliefs regarding health care and food habits on the younger women in the family.

c) Community-Based Nutrition and Health Education

Any meaningful education program must take into account all these difficulties - no free time, lack of resources and limited influence on household decision-making. The curriculum should grow out of an in-depth knowledge of the environment and be relevant to village needs and resources. In order for the preschool centers to be able to respond to household and village constraints, the program needs to be more closely integrated into community life. This can be achieved through several modifications in the current approach: increased emphasis on home visits, better utilization of the mother's contributions ("caisse des meres"), more involvement of village leaders (both men and women) in the operations of the center, and improved training of animatrices and supervisors.

The Dissin (Bagvarwile) mobile center that we visited, run by CESAO, is a notable example of a village-based effort to improve health and nutrition. In fact, the animatrice lives in the village one week of every month. The emphasis of the program is on local foods with CRS commodities seen as a supplement to enrich the diet of children, but easily phased out if necessary. Indeed, the program functioned without food for two years. The community is intimately involved and many men attend the sessions at the center. Four men and four women are chosen to be responsible for center activities, especially follow-up with families throughout the month. They get together every four weeks for training and exchanging ideas with their counterparts from other

* Among the 73 women interviewed, the mean number of persons fed was 10.2 with a standard deviation of 6.0: 3.9 children \pm 2.4; 6.5 adults \pm 4.5.

**Pronounced "toe"

villages. In this particular center, one of the female leaders handled the education session, assisted by the animatrice. Because of her knowledge of village concerns - in this case a recent outbreak of diarrhea with vomiting supposed to be due to a contaminated water supply - she was able to stimulate a dynamic discussion culminating in a proposal to build another well.

Dissin (Bagvarwile) is, however, an exception. Most animatrices recognize the need to increase home visits, but lack of time and the high cost of transportation are major obstacles. As a result, home visits are occurring on a sporadic basis, primarily to those families with severely malnourished or ill children. Only a few centers had invested in planting gardens or income producing ventures such as chicken raising or tie dyeing which they financed from the mothers' payments. There may be ways of financing such projects and reorganizing the work load of animatrices so they are less preoccupied with administrative functions and, hence, more involved with community activities.

3.4.2. Nutritional Status

It is generally accepted in the evaluation literature that the objectives of a nutrition program should be formulated and evaluated in terms of an improvement in nutritional status.* As described by the CRS briefing papers, the goals of both the preschool feeding program and the school feeding program are to improve child nutritional status in Upper Volta. CRS states that "The underlying goal of the preschool program is to insure an adequate rate of growth in all enrolled children," and after describing the main components of the program goes on to say: "CRS/ Upper Volta has chosen to follow the approach of nutrition intervention through supplementary food aid, as the economically significant component, because it has an immediate and direct impact both on the percentage of the total family budget which goes to food and on the nutrition available to the child." CRS's own assessment of verifying the extent to which the preschool feeding program is meeting its objectives is as follows:

"The most easily verifiable objective of the program is that the families of these children are receiving the economic aid that the food package represents. It can also be verified through site visits that the mothers of these children are receiving health and nutrition education and that the

* James Austin et al. Nutrition intervention assessment and guidelines. Cambridge, Massachusetts: Harvard Institute for International Development, 1978.

David E. Sahn and Robert M. Pestronk. Nutrition evaluation project literature review. Ann Arbor, Michigan: Community Systems Foundation, 1979.

G.H. Beaton and H. Ghassemi. Supplementary feeding programs for children in developing countries. Submitted to UNICEF and the ACC sub-committee on Nutrition of the United Nations, 1979.

nutritional status of the children is being monitored. It is more difficult to verify whether these objectives are indeed contributing to the overall goal of insuring an adequate rate of growth in the enrolled children."

As discussed in section 3.2.6, we found that the CRS master charts provide useful aggregate data to assist in supervision of the centers but we agree with CRS that the master chart data are not appropriate to use for evaluation of the effectiveness of the preschool feeding program. Because the team believed that an assessment of impact on nutrition status is an essential element of the evaluation of program effectiveness, we obtained some additional data, with the full cooperation of the CRS Food and Nutrition Program staff, that allow us to draw some tentative conclusions regarding the effect of the preschool feeding program on nutritional status.

To start with an overly simplistic approach, it is clear that the program has not yet managed to ensure an adequate rate of growth in all enrolled children. Table 3.5 shows that only slightly more than half of the enrolled children whose current weights were recorded during our January field visits were > 80% of the median weight for their age. Although seasonal changes in prevalence of malnutrition show considerable variation from center to center (see Appendix D), December and January are generally the months of lowest prevalence of malnutrition. Therefore, a rate of 58% of participating children with adequate growth (>80% of median weight for age) must be considered a fair or even generous assessment of the extent to which CRS' goal is being met. At the same time, it is important to keep in mind that Upper Volta is an extremely poor country. The more relevant question is whether the participant children are better off than they would have been without the preschool feeding program.

During our visit we were able to obtain weights of participant children from 26 centers. In most cases a member of the evaluation team recorded the weights on a data form at the same time that the center staff were actually weighing the child so that the weights could be verified. In a few of the centers, some or all of the weights had to be obtained from the individual growth charts. In this case, the most recent weight was recorded, which was always either from January 1981, or December, 1980. Children were only included as participants if they had been enrolled for a minimum of six months and if they had not missed more than two visits during the past six months. Almost all of the children had attended regularly for considerably more than six months.

At 13 of the centers, it was also possible to obtain the weight at the time of inscription for a group of children of comparable ages. These weights were obtained from the center registers with the help of the person responsible for the center who explained how those data were recorded in the registers to ensure that we actually got the initial weights of the children. We only recorded weights of children who had been between 7 and 36 months at the time of registration. This seemed to define the outer limits of an appropriate comparison group since there were no children who fit our definition of a participant younger than 7 months old, and there were only a small number of new inscriptions

TABLE 3.5

Nutritional Status of Participants in the Preschool Feeding Program^a

	<80% wt/age	N	!! >80% !! wt/age	N	Total
7 - 12 months	43%	65	!! 58%	86	151
13 - 24 months	54%	193	!! 46%	167	360
25 - 36 months	35%	95	!! 65%	178	273
36 - 57 months	27%	48	!! 73%	132	180
TOTAL	42%	401	!! 58%	563	964 ^b

- a Participants were defined as children who had been enrolled in the program at least six months and had not missed more than two visits during the previous six months. All participants' weights were from December 1980 or January 1981.
- b The 964 children are from the following 26 centers: Satui, Touganbaua, Léna, Koulma, Koubri, Toece, Boassa, Madéni, Potiamanga, Pala, Dissin, Ikudi, Banfora, Kongoussi, Boussé, Manega, Dapelogo, Tanghin Barrage, Paspanga, Kyon, Doulougou, Ziniaré, Namoungou, Bougé, Bupiena and Tambaga

over 36 months old.* Because there was a relatively small number of new inscriptions per month at the majority of centers, and because a large proportion of new entrants were less than 7 months old, at some centers we had to check back through one year or more to obtain a big enough comparison group. We later analyzed the data on new inscriptions to see if there were significant seasonal variations that might bias our results and found that there were not (see Appendix D).

We chose new entrants as the most appropriate comparison group because they came from the same communities as the program participants and, further, they represent the same subpopulation within the communities that self select to participate in the program. We believed that even if it had been feasible to obtain weight for age for a randomly chosen sample of non-program children, this would not have been as desirable a comparison group since it would have been difficult, if not impossible, to insure that they were from the same socio-economic background as the participant groups.

Table 3.6 summarizes the results of the comparison between program participants and new inscriptions. For the 7-12 month group there is no difference between the two groups. The participants actually seem to be slightly more malnourished, but the difference is not statistically significant. There is

*We were also told that it tended to be only malnourished children who were allowed to enroll past the age of 3.

also no significant difference between the two groups for the children 13-24 months. For the children 25-36 months, both the rate of acute malnutrition (<60% of median weight for age) and the rate of moderate malnutrition (<80% of median weight for age) are considerably lower among program participants although only the difference in the rate of moderate malnutrition reaches statistical significance. It is possible that this difference does not represent the effect of the feeding program on the participants but rather an unusually high rate of malnutrition among the older new entrants.

In brief, the data in Table 3.6 suggest that overall there is very little difference in rates of malnutrition between participants in the CRS school feeding program and a group of new inscriptions of comparable age, but when the data are examined separately by age groups the participants in the 25-36 month group are significantly less malnourished than the new inscriptions of that age.

TABLE 3.6

Nutritional Status of participants in the preschool feeding program compared with new inscriptions, by age group^a

	Participants			New Inscriptions		
	<60% wt/age	<80% wt/age	N	<60% wt/age	<80% wt/age	N
7 - 12 months	8%	44%	59	5%	43%	223
13 - 24 months	9%	53%	209	15%	51%	104
25 - 36 months	3%	36% ^b	148	10%	51%	63
TOTAL	7%	46%	416	8%	47%	390

^a The 390 children are from the following 13 centers: Dissin, Banfora, Kongoussi, Bousse, Manega, Dapelego, Tanghin Barrage, Paspanga, Kyon, Ikuldi, Douloukou, Ziniare and Bupiena.

^b The difference in proportion malnourished between participants and new inscriptions is significant at $P < 0.05$.

In 1973, Dr. Frederika Jacobs conducted a similar evaluation of the CRS preschool feeding program in Upper Volta.* Dr. Jacobs analyzed data based on 888 child weight charts from 22 feeding centers, which were reasonably representative of the geographical distribution of the CRS program. When this cohort of children was registered in the program, 37% were malnourished and as the children remained in the program their rate of malnutrition decreased until it was only 9% after

*Dr. Frederika Jacobs. CRS, Field Bulletin No. 21, Nairobi, August 1974.

24 to 36 months of participation. Dr. Jacobs examined the effect of length of attendance separately for each of four age groups (based on age at inscription) and found that the only group that failed to show a consistent improvement over time were those who registered between 0 and 11 months. Their rates of malnutrition were slightly higher after 6-11 months of participation and after that began to decrease. However, because of the way Dr. Jacobs presents her data, it is not possible to separate the effect of being in the program from the effect of growing older and it is quite possible that the improvement in prevalence of malnutrition is due to the latter.

Although Dr. Jacobs only gives the age range at registration of participants and it is therefore not possible to directly compare her findings and our findings on participants, we can make the following general comparison. Dr. Jacobs' 210 new entrants between the ages of 12 and 23 months had a prevalence of 43% <80% of median weight for age compared with our new entrants aged 13-24 months who had a prevalence of 51% <80% of median weight for age. Similarly, her 108 new entrants of 24 to 35 months had a prevalence of 45% <80% of median weight for age while ours of 25 to 36 months again had a prevalence of 51%. Both of these differences are statistically significant ($p < .05$) but this could be due to annual variation or to the studies being done in a different group of centers. After 6-11 months of participation the children in Dr. Jacobs' study who had registered at ages 12 to 23 months had only 26% <80% of weight for age and those who had registered at ages 24 to 35 months had only 22% <80% weight for age. Although it is not appropriate to calculate statistical significance because the age ranges are not exactly comparable, it is clear that these rates of malnutrition are substantially lower than the rates we found for similar aged program participants.

3.4.3. The diets of the children in the preschool feeding program

Although we do not have conclusive evidence, there is strong reason to believe that one of the reasons the program is having so little effect on the nutritional status of participating children is that the children are not consuming more than a small amount of the food ration. First there is anecdotal evidence: both the CRS supervisors and the animatrices at many of centers told us they believed that the ration was being shared among the whole family. This impression was further strengthened by evidence from the interviews with the mothers (see Appendix B for questionnaire). The mothers reported that the ration only lasted about half the month with a considerable number of mothers reporting one or more of the foods lasting less than a week. When asked how they used each of the foods in the ration, most of the mothers said that at least one of the uses of the corn meal was to make a bouillie,* but only half reported using either the oil or the milk in a bouillie. About a third of the mothers reported using the powdered milk to make liquid milk. Presumably much of the liquid milk was drunk by the children

* Bouillie is a starch gruel and is usually made especially to be fed to young children. The traditional bouillie is made with millet, sorghum or rice, and boiling water.

or used to thin the to given to the children, but two of the mothers specifically mentioned drinking the milk themselves. The oil seemed to be the food most used for general family consumption since half the mothers reported using the oil for the sauce they prepared for to, and a third used the oil along with the corn meal to prepare couscous.

We incorporated the simplified dietary survey methodology developed by the USAID Office of Nutrition, in collaboration with the Center for Disease Control, into our interview to obtain a qualitative description of the diets of children and of the food available in the household.* The results are presented in Table 3.7. Several interesting observations can be made about the dietary descriptions in Table 3.7, but any generalizations must be extremely tentative since 24 hour recall data can be misleading due to variations in diet by day of the week or season of the year, due to incomplete recall on the part of the informant and/or desire to provide expected answers. We found it curious that 9 mothers reported having fed their children powdered milk and 15 reported having fed their children corn meal while only 7 reported having had powdered milk available to the household and only 5 reported having had corn meal available. Since these were the only two foods mentioned more frequently in the children's diets than in the household food availability, we suspect that mothers may have occasionally mentioned these foods because they thought they should have given them to their child. When asked about a source of fat in the diet, only half of the mothers said that they had used an oil or fat in preparing the child's food and of these the majority specified that they had used karité butter.

When all the evidence is considered together, it seems fairly clear that the food ration is being shared among the household, and this is certainly the usual finding with take-home feeding programs. We do not have the necessary data to estimate what fraction of the supplement is being consumed by the target child, but by the end of the month less than one third of the mothers were able to say that they had fed any one of the ration foods to their children on the previous day.

The distribution of the ration within the household is not the only important issue; if the child were being fed an equivalent amount of other foods that should also contribute significantly to ensuring an adequate rate of growth in the participant children. Mothers reported feeding their children an average of four times a day. When asked what special foods they prepared for their children, all but six of the mothers cited some special food. The most commonly mentioned was bouillie; about 40% of the mothers mentioned plain bouillie and another 20% mentioned enriched bouillie. Approximately 40% of the mothers said they prepared to or to with sauce for their children and about 20% mentioned that they prepared rice either plain, or enriched, or as bouillie. Table 3.7 suggests that, at least in January, the children's diets contained a reasonable variety of foods. Sixty-eight percent of the children were still nursing, which is consistent with the average reported weaning age of two years. The most frequently mentioned foods

*The techniques necessary to obtain reliable quantitative dietary information would have been too time consuming to have been included in this evaluation.

were soumbala* and vegetables, both of which are usually used to prepare the sauce for the to. Except for a few infants less than six months, all of the children had a grain in their diet; millet seemed to be the preferred grain for children, followed by sorghum and then rice. In addition to soumbala, several other protein foods were mentioned quite frequently; 37% of the children had eaten dried fish, 22% had eaten peanuts, 15% had eaten meat and 14% had eaten peas or beans. It is interesting to note, nonetheless, that fewer than half the families who had beans, peas, peanuts or meat available gave these to their preschool age children.

TABLE 3.7

Comparison of food eaten by children and food available in households

Foods	Child diet ^a		Family diet ^a	
	N	%	N	%
mother's milk	50	(68)	-	-
powdered milk	9	(12)	7	(10) ^b
other milk (fresh or condensed)	2	(3)	3	(4)
millet	41	(56)	50	(69)
sorghum	25	(34)	43	(60)
corn	6	(8)	18	(25)
cornmeal	15	(21)	5	(7) ^b
<u>fonio</u>	0	(0)	3	(4)
<u>rice</u>	16	(22)	24	(33)
starchy roots	3	(4)	10	(14)
bread	8	(11)	13	(18)
vegetables	52	(71)	68	(94)
fruit	2	(3)	6	(8)
beans or peas	10	(14)	31	(43)
peanuts	16	(22)	36	(50)
dried fish	27	(37)	27	(38)
meat	11	(15)	18	(25)
<u>soumbala</u>	52	(71)	65	(90)
eggs	4	(5)	5	(7)
sesame	2	(3)	11	(15)
sugar	17	(23)	-	-
<u>karité</u> butter or oil	37	(51)	46	(64)

^a 73 mothers responded to question on child diet and 72 mothers responded to questions on family diet.

^b It is not clear why fewer households reported having these items than reported them in children's diets.

* Soumbala is a fermented food prepared from the seeds of the neré tree; it is a rich protein source containing 36.5g protein per 100g.

Putting together what is generally known about the growth of children in low income countries with the data obtained on the nutritional status of children in the preschool feeding program in Upper Volta, the disease rates among children in Upper Volta, the average weaning age of these children, the use of the food ration by their families, and the composition of child and household diets in our sample, we have drawn the following tentative conclusions:

- 1 - Children do not consume the entire food supplement; probably they consume less than half of it.
- 2 - Although supplementary feeding begins at about six months, breast feeding continues for two years and it is likely that children consume only small quantities of other foods until the time they are weaned.
- 3 - Some combination of disease burden and inadequate food consumption cause a high prevalence of malnutrition among the children who are enrolled in the preschool feeding program and the program does not contribute to a significant reduction in this level of malnutrition until the children are over two years old.
- 4 - Good quality foods are available to the households, local equivalents as well as the ration itself, to be given to the 7 to 24 month old children and therefore the educational activities should more strongly emphasize the importance of feeding adequate quantities of supplementary foods to program children in this age group.*

3.5. Conclusions and Recommendations

(1) In spite of the relatively large ration provided, we found that the preschool program had not greatly improved the nutritional status of program children as compared to new inscriptions. Nor did the nutrition and health education appear to have the desired effect on the behavior of mothers, as reported by the mothers during the interviews. We therefore conclude that a major strengthening and reorientation of the educational program is critical to achieving the nutritional goals expected from the program. Emphasis should be placed on diagnosing constraints at the household and village level early on in the program so that learning and community activities can be designed that respond directly to local concerns and initiative. This will require a somewhat different approach to training and to the organization of center tasks.

* In practice, in order to ensure that children of this age consume enough food it is necessary that they be fed frequently during the day, particularly where the diet primarily consists of a bulky starch.

Based on these findings, the team makes the following recommendations to improve the nutrition and health education component of the CRS program:

- (1-1) We recommend that the training of center staff be strengthened in these areas (and that CRS supervisors be involved as much as possible):
 - analysis of the social, economic and technological problems of a community;
 - design and organization of community development projects affecting nutrition and health;
 - motivational and pedagogical techniques;
 - knowledge and utilization of local food equivalents to the FFP commodities.
- (1-2) We recommend that more attention be given to utilizing the growth chart as a teaching tool, especially when the child's weight is recorded. This is particularly important because it is the only time when the animatrice can deal directly with the mother on a one-to-one basis. Food and nutrition supervisors need to ensure that this individual communication is carried out more uniformly.
- (1-3) The food demonstrations should be used more effectively as a teaching device and linked more closely with the education program.
- (1-4) CRS should continue to develop its education materials. In addition to visual aides, priority should be given to designing guidelines for the education talks, outlining the main topics of discussion and specific questions to elicit participation. This core curriculum should be sufficiently flexible to be adapted to local needs.
- (1-5) The Ministries of Health, Social Affairs and Rural Development have their own training programs for center animatrices and therefore should be closely involved in any nutrition education undertaking. Thus, we recommend that an inter-ministerial coordinating committee which includes CRS be established to advise on an appropriate training program. We have ascertained that there are several competent training institutions in Upper Volta, for example CESA0, IPD, or INADES, that could design and carry out this training activity. We, therefore, strongly urge CRS and USAID, with assistance from DSB/Nutrition and the West Africa Regional Nutrition Advisor, as appropriate, to request/provide the necessary technical and financial assistance for the implementation of a nutrition education program.
- (1-6) In addition to the specific functions of the center staff, animatrices should be encouraged to work closely with the community to adapt the preschool program to village problems/needs. Village leaders (both male and female) should participate in the centers' activities as well. The work load of the center staff should be reappraised so that visits, especially to the homes of the more malnourished children, be increased resulting in a better understanding of household constraints and more effective relationships with the family.

(1-7) Where available, a portion of mothers' payments should be allocated for home visits and other community development activities, such as village pharmacies, vegetable gardens, or wells. The possibility of raising those contributions to 100 CFA/month should be seriously explored.

(1-8) We recommend that all new approaches to nutrition and health education be tried on a pilot basis to determine their effects on changing knowledge and behavior prior to large scale introduction.

(2) Recognizing that poverty is a primary, and perhaps the primary constraint to adequate child feeding in the household, we recommend that research be conducted to determine the effects of the ration on family consumption and expenditure patterns with the purpose of ascertaining (a) the relative importance of family economic status as compared with other critical factors affecting the nutritional status of the target population, and (b) the optimal size and composition of the ration.

(3) Until now the only limitation on the growth of the preschool program has been the management capability of the CRS staff but future growth is also likely to be limited by financial constraints and the availability of commodities. Therefore, we recommend the following ways of controlling the size of the preschool program:

(3-1) We recommend there be no expansion until a more effective education program and/or other approaches that result in a positive impact have been implemented in all centers.

(3-2) We recommend uniform graduation of individual children from the program at 36 months (with the possible exception of the severely malnourished), and more systematic dismissal of irregular attendees. (We also fully support CRS in their efforts to eliminate weight achievement as a criterion of graduation.)

(3-3) We recommend that specific criteria and mechanisms be developed for phasing out food aid and continuing preschool activities in participating centers. We believe that a defined time period (for example, five years) might be the fairest and administratively most practical criterion. Although it might be more desirable to base the phasing out on the achievement of knowledge and behavioral objectives, economic status and/or access to food, such criteria would require more information and staff. Technical support from CRS, other PVOs, and ministries for provision of complementary health and community development activities* will assist in facilitating the "graduation" of centers.

*CRS/UV is planning to test an oil seed project aimed at augmenting household income through the cultivation and processing of drought-resistant oil seed plants.

- (3-4) Recognizing that malnutrition levels among preschool children are high throughout Upper Volta in comparison with other countries, we recommend that first priority for opening new centers be given to areas in which rates of malnutrition are highest and that a national nutrition survey and ongoing regional nutrition surveys used to help pinpoint the more needy areas.
- (3-5) Given that nutrition education and some preventive health care activities are already offered at the CRS preschool centers, and that health and nutrition are closely linked, we recommend that the new primary health care/MCH centers planned by the MOH be coordinated with the CRS preschool centers where such centers exist. As we stated above, we do not recommend that food aid remain an integral part of these centers, but rather that it be phased out within a specified time period.
- (3-6) We recommend that consideration be given to changing the composition of the ration. If, for example, the ration per child were 1 kg. milk, 3 kg. maize, and 1/2 liter of oil, it would still represent a significant nutritional supplement to a pre-school child (providing approximately 640 calories and 20 grams of protein) but at a cost of approximately \$6.50 less per participant per year than the current ration. It would be important to pilot test any such modified ration to see if it represented enough of an economic incentive, combined with other elements of the program, to assure regular attendance on the part of mothers.

(4) We recognize that the Outreach Grant contributes to reducing the inequities of access to services that would otherwise prevent the most underserved, and very poor areas from participation. Without it, the most remote areas, with the least developed infrastructure, must carry a prohibitive burden of transport costs for the commodities, leaving no monies for other development activities. Moreover, the Outreach Grant is necessary to strengthen the supervision of centers in these areas that often require the most support, and are the most expensive for CRS to assist. Therefore, we recommend that Outreach Grant funds be continued until these centers are "graduated."

(5) We recommend that the program include a more systematic nutrition rehabilitation component for severely malnourished children. Both center staff and mothers should be required to follow certain prescribed steps for the treatment of malnourished children and it should be explained carefully to mothers that they will be dropped from the program if they do not take the required actions to treat their severely malnourished child.*

* The particular treatment prescribed for severely malnourished children might vary from center to center depending on the size of the center staff, the facilities and complementary services available, and the distance mothers live from the center. One of the few centers we visited that had a nutrition rehabilitation program was the Tambaga center. At that center, there were several huts available and the sisters would ask the mother to come live in one of these huts with her malnourished child for a week. Weekly, instead of monthly visits to the center is another approach used in some centers. However, this requires that the center have at least one session per week (which many don't). Also it may be difficult for mothers to get to the center every week.

(6) Recognizing that there are some advantages of the growth surveillance system compared to the system currently used by the MOH but that little is known about the comparative educational value and ability of center staff to use the two systems, we recommend research to determine the relative effectiveness for mothers' education and the relative acceptance and usefulness of the two systems. We believe that only one system should be used throughout the country and that, after weighing all available evidence, CRS and the MOH should agree on a common system. We also support CRS' efforts to continually improve weight and age recording and the systematic differentiation of new entrants on the Master Chart.

(7) We recommend that CRS regularly study the effect of the program on the nutritional status of children in a sample of centers, comparing new entrants and program children. This research will measure whether or not the program is achieving its goal, and the extent to which programmatic inputs appear to be working or new approaches need to be tried.

(8) We concur with CRS that the Master Charts are not a useful tool for measuring nutritional impact because there is no way of determining length of time in the program among participants. However, we believe that data for studying impact can be collected reasonably efficiently by sampling individual cards of participants at the centers and that this method enhances the reliability of the data as the researcher observes the weighing and recording. Moreover, the comparison group of new inscriptions is most easily obtained from the center registers because even when identified on the Master Charts, locating them on the charts is painstaking unless new enrollments are clumped together in a single session. Therefore, we recommend that all centers be further encouraged to systematically record the weights of new entrants, as well as as date of inscription, sex, and birth date, in the register of new inscriptions.

(9) Although the MCH center network is an excellent one to use for distributing famine relief the program is a nutrition program. Therefore, we recommend that mothers' rations be regularly distributed, to the extent possible, to women in the third trimester of pregnancy instead of being used to meet special seasonal and regional needs.* We also recommend that more emphasis be given to nutrition education for women of childbearing age.

(10) CRS supervision of distributing centers, and coordination with local and regional agencies and authorities, has improved since the food and nutrition program has been fully staffed. We endorse the CRS approach to supervising the operations of preschool centers. We believe that local and regional coordination could be more fully supported if CRS efforts on a national level would include increased cooperation with collaborating public and private sector organizations on: joint training activities, research activities, regular dissemination of program data, and continued dialogue.

* See Appendix D: Seasonal and Regional Variation in Malnutrition in Upper Volta.

(11) The warehousing, distribution and accountability of commodities is well organized and controlled by CRS. The CRS planned request to AID for capital assistance with the development of additional warehousing facilities was not far enough along for the team to assess. We do recommend that AID, in cooperation with CRS, study the problem of reducing oil wastage through improved packaging and handling practices.

4. THE SCHOOL FEEDING PROGRAM (SF)

4.1 Objectives

The FFP objectives for SF, according to the Handbook, are "to encourage recipient countries to provide food to primary school children in order to improve school attendance by children of the poorest elements of the society and to improve their health, vigor, learning capacity, and nutritional status."

The CRS briefing papers suggest that there are multiple objectives for the school feeding program. CRS states that the short term goal of the program is provision of a mid-day meal, but that the longer term goals of the school feeding program, together with the recently initiated Growth Surveillance System, include ensuring an adequate rate of growth in participating children, monitoring the nutritional status of school children, introducing nutrition education in the school curriculum, and developing ancillary activities such as school gardens. The CRS response to a question concerning the extent to which the school feeding program is achieving its objectives suggests that additional objectives of the program are: increasing the students' capacity to learn, reducing absenteeism, and providing an economic aid to the schools and to the families of the school children.

Although there is no documentation relating to GOUV attitudes toward SF, nor was the Ministry of Education able to arrange a formal meeting with the team to discuss SF, the team found unanimous support for SF among the Voltaic officials with whom the team talked. This support is attributable to historic as well as current political reasons: SF has existed in Upper Volta since the early 1960's and most of the teams' contacts had fond memories of it from their childhood. Currently, SF is very popular with the beneficiaries and their families. This broad network is important to the government.

4.2 Organization and Management

4.2.1 Coverage

The School Feeding program currently has approximately 218,137 recipients and reaches almost 13% of the school age population (6-16 years) of Upper Volta.* The program operates in 1,462 schools (about 85% - 90% of elementary schools), including scholastic primary schools administered by the Ministry of Education and private religious and community groups, and the Young Farmer Training Centers (CFJA's) under the Ministry of Rural Development. Prior to the Outreach Grant less than half the schools in outlying areas were in the program because transportation costs were too great. At present the geographic distribution of

* Less than 16% of school-age children attend school in Upper Volta. The proportion of boys to girls in primary school is approximately 5:3.

participating schools approximately corresponds to the population distribution, and includes a very high proportion of poor and rural children. The rates of malnutrition among the target children of the School Feeding Program are similar to the high rates for that age group reported in the O.R.A.N.A. nutrition survey done in Upper Volta in 1978 (see section 2.2.).

4.2.2 Program Costs

The SF program cost an estimated \$10,833,000 in FY '80 or \$49.69 per participant. The high cost per participant is largely traceable to the high international transport cost which averaged \$278 per metric ton between East Coast ports and Bobo-Dioulasso/Ougadougou. The costs of the commodities and the international transport total \$9,158,000, or 85% of the total figure. Internal costs (including internal transport, storage, firewood, and the time of CRS personnel and teachers) totaled \$1,675,000, of which 78% is equally divided between participants and GOUV institutions, specifically the Ministries of Finance and Education. Approximately 3% comes from CRS's own operating budget and 19% from the Generic grant for the Sahel and the Title II Outreach grant. (See Appendix C for detailed budgetary breakdown.)

4.2.3 Organization and Logistics

Requests to participate in the School Feeding program are initiated by individual schools, in cooperation with the Ministry or organization under whose auspices they fall. They are approved after a site visit by CRS to ensure that the basic storage, cooking facilities and accountability requirements are met.

CRS administrative control includes oversight of the logistics; ordering and inventory of the commodities, and end-use checking for verification. The accountability is very high and any malfeasance is immediately dealt with by CRS, with full cooperation of the GOUV. Responsibility for transport is assumed by the schools, excepting for those further than 100 kilometers from the warehouse, which are covered by the Outreach Grant. Only three of the schools visited reported irregularity of supplies because of problems with the transporters. However, several schools reported frequently receiving damaged oil cans and also torn milk sacks.

The operations of the School Feeding program are generally uniform. The food is prepared and served at school at the end of the morning. There is usually a daily canteen but several schools only had enough food to serve lunch two or three times a week. In general, the cooking is done by village women who are paid out of funds collected from the parents (ranging from 10 - 100 CFA a month). In a few of the schools visited, older children prepared and served the food and in one case, parents did it voluntarily. In 1980, CRS also began distributing a take-home ration prior to the summer break.

The storage facilities were adequate in all schools visited although several reported they had had some thievery. A few schools were using classrooms for storage pending the construction of separate warehousing. The cooking facilities varied. In some schools the parents had built a cooking area, in others the preparation was done over an unprotected fire. A number of schools were quite far from a water source.

More than a fourth of the schools visited reported that the children do not like the milk, or that it gives them diarrhea. This is probably indicative of lactose malabsorption although it could be due to improper preparation of the milk. Rice was found to be the most popular commodity. Rice is often served on Saturday as an added incentive to attract children to school for the half-day. Most of the schools visited had cooked "couscous" -- steamed maize meal with oil added. The children seemed to like it. Many of the children ate their lunch immediately at school, some ate part and took part of it home, others took the entire ration home. Several children said their younger brothers and sisters would cry if they didn't share the food.

Introduction of the Growth Surveillance System into participating schools began in 1979. The GSS for schools includes an individual, and a master chart, with weight for height as the nutrition status indicator. Thus far, the system is functioning in less than 10% of the schools and only the master charts have been used.

The purpose of the GSS is to provide information on the nutritional status of children in the SF program, and to serve as a basis for introducing nutrition education into the schools. It is hoped that the individual charts will be used by the teachers as a tool to teach the children and their parents the linkages between food, growth and health. At present there is very little nutrition related education in the curricula -- some personal hygiene in the younger primary years, and some teaching of food types in the older grades.

One of the schools visited had a garden and produced vegetables to eat and sell. CRS is currently launching a pilot project (funded by the Sahel Generic Grant) to introduce activities into the school curriculum that will complement the school feeding program. These will include vegetable gardening, fowl raising, handicraft and nutrition education.

4.3 The Ration

As with the preschool ration, we analyzed the school ration in terms of the energy and protein it provides. Table 4.1 shows the composition of the school ration and the extent to which it fulfills the energy and protein requirements of school children. Again, as with the preschool feeding program, the school ration has been analyzed both in terms of the nutritional requirements set by FAO/WHO and the nutritional requirements set by the MOH of Upper Volta. According to the FAO/WHO requirements, the school lunch provides 70% of the energy requirement and 235% of the protein requirement of a child 7 to 9 years old while it provides 59% of the energy requirement and 196% of the protein requirement of a child 10 to 12 years old. Whichever requirement levels one feels are more reasonable, it is clear that the school lunch provides at least two thirds of the daily energy and protein needed by the students.

As discussed with reference to the value of the ration in the preschool feeding program, the value of the school feeding ration can be viewed from two perspectives, namely the amount that would have to be spent purchasing an essentially identical ration at market prices and the value of a low cost substitute ration. If families view the ration as a substitute for buying cheaper foods, or if the school meal is simply additive, then the second approach is probably a more correct approximation of the value of the ration in the minds of the parents of recipients.

TABLE 4.1

ANALYSIS OF THE SCHOOL FEEDING RATION

Commodity	Ration/ child mth.	Ration/ day (30 days)	Calories/ 100g	Total Calories/ day	% Daily ^a Caloric requirement		Proteins/ 100g	Total Protein/ day (g)	% Daily ^b Protein requirement	
					7 - 9 yrs.	10 - 24 yrs.			7 - 9 yrs.	10-12 yrs.
Powdered milk	2 K	100 g	363	363	17 (19) ^c	14 (16)	36	36	144 (63)	120 (58)
Soy fortified maize	3 K	150 g	392	588	27 (31)	23 (26)	13	20	78 (34)	65 (32)
Rice	1 K	50 g	363	182	8 (9)	7 (8)	7	3	13 (6)	11 (5)
Soy oil	1 L	46 g	884	406	19 (21)	15 (18)	-	-	-	-
Total				1539	71 (80)	59 (67)		59	235 (103)	196 (95)

^a Nutritional needs - FAO/WHO : 7 - 9 years 2190 calories/day 10-12 yrs. 2600 M (2350 F)
 Nutritional needs - Upper Volta : " 1920 " " 2290

^b Nutritional needs - FAO/WHO : " 25 g/day " 30 g M (29 F)
 Nutritional needs - Upper Volta : " 57 " " 62

^c Percent of Upper Volta requirements in parentheses.

Values for the ration using the two approaches are given as the follows:

	Market value of identical ration (\$ per month)	Market value of low cost substitutes
corn meal (3kg)	1.08	1.08
rice (1kg)	.67	
corn meal 1kg)		.36
milk powder (2kg)	8.00*	
<u>soumbala</u>		**
vegetable oil (1 litter)	1.57	
<u>karite butter</u>		**
total	11.32	

The two approaches produce very different results. The market value of close equivalents is \$11.32 per month or over \$135 per year which is a significant amount when compared to the estimated annual per capita income figure of approximately \$160.*** The value is dominated by the milk powder. The low cost substitute ration includes corn meal for rice, karite butter, which is the most commonly used fat (although oil is preferred), and soumbala, the most common of a number of foods normally used to provide protein requirements.****

4.4. Measures of Effectiveness

4.4.1 Nutritional Status

We found evidence that the school feeding program is having a positive effect on the nutritional status of the children, or to be more precise that the lack of it was correlated with a deterioration in nutritional status.

In September, 1979, the Growth Surveillance System was introduced into 249 primary schools of which 152 sent back completed master charts during the 1979-1980 school year. The intent of the Growth Surveillance System is that the children's heights and weights should be recorded three times during the school year (which runs from October through July for the primary schools and from May until February for the CFJA's). At the moment the only nutrition status indicator that is calculated and recorded on the master charts is weight for height and these are the data that were available to us from CRS in Ouagadougou.

*Imported milk powder in 1 kg. tins sells for approximately \$8 in a grocery store in Ouagadougou. A figure of \$4 per kilo is thus probably a conservative estimate of the value of the powder in the market.

**Negligible value, often gathered growing wild and prepared in the home (although the gathering and preparation require a lot of time).

***The World Development Report 1980, The World Bank, Washington, D.C., 1980.

****See Table 3.7

The delayed opening of the schools this year provided an opportunity to evaluate the impact of the school feeding program on nutritional status. CRS provided a list of 30 schools for which verified master chart data for December 1979, January 1980 or February 1980 were available, and for which they could reasonably conveniently arrange another round of measurements during the visit of the evaluation team. We randomly chose 13 of these schools and the heights and weights of all children in these schools were measured during the third week of January, 1981. Table 4.2 presents the results of our comparison.

The 3,426 children for whom we have measurements taken in January or February of 1980 had been receiving the school lunch for three months, since October of 1979. The 3,265 children who were measured in January 1981 had been without any food supplement for at least three months and probably longer since the summer ration was likely to have been used up well before the end of the July-August vacation. Weight for height is usually considered to be the nutrition status indicator that is most sensitive to short term changes, and we find that in January 1981 the children were significantly more malnourished than they had been at this same time a year earlier. Both the prevalence of wasting (less than 80% of median weight for height) and the prevalence of moderate malnutrition (less than 90% of median weight for height) were significantly higher in 1981. Although we cannot attribute this deterioration of nutritional status with certainty to the lack of the school lunch, there is no environmental factor external to the schools of which we are aware that would explain such a change in nutritional status. In the three regions where these particular schools are located (Reo, Yako and Koudougou) the most recent harvest was not unusually poor and was not noticeably different from the previous year. However, it is important to note that in a few of the schools listed in Table 4.2, there was either no change or a decrease in prevalence of malnutrition between 1980 and 1981, which may be due to isolated measurement problems or to factors other than the school lunch program.

Based on the interviews with the school directors and a few surveys among the school children themselves, we came to the conclusion that most school children do not eat a meal in the morning. We were informed, in fact, that eating only an evening meal is a common pattern among subsistence farm households in Upper Volta. Therefore, it seems quite possible that consumption of the school lunch provided by the CRS school feeding program may almost double the amount of food that the children consume. If this is the case, it is certainly consistent with our finding of a rapid deterioration in nutritional status when the school lunch was unavailable for several months.

4.4.2 Attendance and Learning Ability

Our only information on school enrollments and absenteeism came from interviews with the school directors. At many schools the directors felt that the school lunch provided an important motivation for attendance, but at several others the directors said the desire for schooling was high and attendance was good even without the added attraction of a school lunch (one of these was a school that had run out of food supplies about ten days before our visit). However, a number of teachers said they think it has positive effect on the learning abilities and attention span of children, especially in the afternoon.

TABLE 4.2

Nutritional status of participants in the school lunch program: a comparison between early 1980 (after receiving lunch for 3 months) and early 1981 (after no school lunch for 3 months).

Schools	Jan. - Feb. 1980			January 1981		
	< 90 % wt/ht	< 80 % wt/ht	N	< 90 % wt/ht	< 80 % wt/ht	N
Ramengo	27 %	2 %	181	43 %	4 %	181
Poa	43 %	4 %	183	68 %	11 %	151
Koudougou (sud)	23 %	1 %	407	39 %	10 %	415
Koudougou (est)	29 %	2 %	414	21 %	3 %	449
Issouka	18 %	1 %	177	42 %	5 %	153
Bourkina	26 %	1 %	245	44 %	7 %	286
Arbollé	22 %	1 %	235	23 %	1 %	298
Douré	65 %	11 %	158	17 %	0 %	77
Yako (mixte)	19 %	1 %	450	48 %	10 %	387
Yako (protestant)	35 %	0 %	164	33 %	2 %	138
Banankyo	36 %	2 %	166	56 %	9 %	218
Goundi	34 %	2 %	130	16 %	1 %	183
Reo (mixte)	16 %	3 %	238	43 %	4 %	329
Total	29 % ^a	2.4 % ^a	3426	38 %	5.6 %	3265

a The difference between proportion malnourished in 1980 and in 1981 is significant at $p < 0.001$.

4.5. Conclusions and Recommendations

(1) In view of the high rates of malnutrition among school children in Upper Volta and the positive effect of school feeding on the nutritional status of those children, and the very high priority of SF to the GOUV, we believe that the program should continue, to the extent possible, to service all qualified schools. However, we recognize that, because of the rapid increase of new schools and the number of children in participating schools, natural growth may even exceed the 10% - 12% per year, estimated by CRS. Moreover, we do not foresee any way of nationalizing or localizing responsibility for SF within the next five or ten years. Therefore, we recommend that the following economies be introduced into the SF program:

- (1-1) We recommend eliminating the take-home ration. Data from our preschool center research suggest that take-home rations are shared among family members, and that greater sharing occurs during the "hungry period" which is coincident with the school holidays. If the take-home ration does not make a difference in the nutritional well-being of the school children, then there is no justification for singling out school families for food supplementation during the difficult period.
- (1-2) We recommend that a least-cost, acceptable ration be distributed through SF. This will probably mean eliminating rice.
- (1-3) Conservatively estimating the annual growth rate in the number of beneficiaries and transportation costs at 10% and 15% respectively, Outreach Grant funds would have to nearly double every three years in order to keep pace. Therefore, Outreach should be used as a stimulus to start SF in outlying areas and not continue indefinitely. We recommend that plans for gradually phasing out the Outreach Grant from individual schools be discussed with the GOUV with the view that the costs will be assumed by the GOUV or possibly by the schools themselves.
- (1-4) Recognizing that malnutrition levels among school children are high throughout Upper Volta in comparison with other countries, we recommend that first priority for expanding the program be given to schools that are located in areas in which rates of malnutrition are highest and that a national nutrition survey and other regional nutrition surveys be used to help pinpoint the more needy areas. We also suggest that lower priority be given to urban schools, and those from which it is easier for children to get home at lunchtime.

(2) In view of the abundance of protein in the school ration, and the presumed high prevalence of lactose intolerance, we recommend that milk be eliminated from the school ration,* and possibly partly replaced with Title II peas or beans. These may prove to be more acceptable to children and moreover are more easily produced or purchased locally. Thus participants will better understand the local equivalents for protein in their diet, and over the long term, imported foods will be more easily replaced by local products.

*Children under the age of 3 do not normally manifest lactose malabsorption and therefore the team did not recommend discontinuing milk in the preschool ration.

(5) We concur with CRS that nutritional education among school children and their parents is desirable in order to affect dietary and child feeding practices at home and make a long-term contribution to improving knowledge and changing behavior in the society. We therefore support CRS' plans to link nutritional education with the growth surveillance system.

5. THE FOOD FOR WORK PROGRAM (FFW)

5.1 Overview

The goal of FFW projects according to the Food for Peace Handbook is "the achievement of needed agricultural/economic, and community improvements by providing commodities to support the labor of unemployed and underemployed local workers." The CRS/UV briefing document states that "the overall objective of the FFW program is to permit the implementation and realization of different development projects in the rural sector by means of food aid."

FFW in Upper Volta has its origins in drought relief activities in the early 1970s. At that time the major objective was to get food out to needy families by various mechanisms of which FFW was simply one. However, in recent years the objective of getting food out to those in need has assumed a secondary level of importance. The amount of food channeled through FFW is small in any event (3,150 m.t. of rice and corn meal in 1980), and nutritional need is not a significant criterion in the selection of projects. Rather CRS is concerned with responding to village level initiatives. The wide variety of projects that have been/are supported under FFW is an indication that the program has been responsive to initiatives from village groups (and local government officials), but this has been at the expense of maintaining a coherent program in terms of (i) a systematic relationship to other CRS programs, (ii) an ability to systematically assess the proposals submitted, follow progress, and evaluate results and (iii) the ability to focus on needy areas or needy individuals within communities.

5.2 Evaluation Approach

The following observations on FFW are based on visits to 25 projects throughout the country over a two week period and discussions with government officials and representatives of CRS and other non-governmental organizations participating in various capacities in FFW projects. The site visits to the projects were useful for viewing the results of the work performed or in progress and holding discussions with those responsible for organizing the work projects. Such discussions were normally conducted on site, namely in or near a village, with many villagers in attendance. Although discussions of technical problems and difficulties in obtaining complementary inputs were possible under such circumstances, villagers could not be expected to say things that might reflect badly upon the village in front of their neighbors. Thus, discussions about the extent of participation and the impact on village spirit were probably slanted much more toward the ideal rather than the reality. It was also impossible to obtain information about possible misuses of food under such circumstances.

In some instances, it was possible to talk to third parties, both Voltaic and expatriate, who had been associated in some capacity with villages receiving FFW and who were prepared to share impressions and information on the impact of FFW upon the individual communities. Although such discussions were usually conducted away from the villages and/or in French, such informants were merely sharing their opinions and impressions - there was no claim to total objectivity based upon careful study.

Although the 25 projects visited included examples of all the important types of projects covered under the FFW program, they cannot be viewed as a representative sample. Projects visited were selected in most instances on the basis of their proximity to preschool clinics and school feeding sites so as to economize on travel time. As a result disproportionately more projects were visited in the Fada and Bobo regions as compared to the Central region around Ouagadougou, where most of the projects are located. At the same time, the evaluation team was exposed to a large variety in terms of institutional/organizational arrangements, complexity of projects, as well as an impressive array of problems. While virtually all the projects visited showed some achievements, the evaluation team was not left with the impression that it had been shown only the more successful projects. In most instances the visit of members of the evaluation team, together with CRS staff, marked the first on site contact between CRS and the village groups.

5.3 Description of Projects

The FFW program encompasses a large number and variety of projects. In the two year period 1979-80, over 700 projects received support under FFW. For purposes of the present discussion, the projects have been grouped in three general categories as indicated in Table 5.1.

Categories A and B are directly related to CRS's current priorities in terms of the FFW program, whereas Category C includes an assortment of projects that are not currently rated as high priority.

Table 5.1 summarizes the numbers of projects for each category. Although the majority of projects (63%) fall in the top priority categories, namely construction of buildings and residences related to other CRS programs, and water related projects, a substantial minority (37%) fall in the low priority category. The difference narrows further when one examines the amounts of food allocated to the different types of projects. Only slightly more than half of the food (54% of the total tons of rice, oil, corn meal and milk) went to projects in categories 1 and 2 between August 1979 and December 1980.*

* The Figures in Table 5.1 exclude a relatively small number of projects in the Bobo sector (less than 70 projects). Also the assignment of some of the projects under training may not be entirely a correct characterization of the priority in each instance. Some training programs receiving food are related to other CRS programs, such as training programs for animatrices of PMIs. However, most support goes to training programs that do not have such a direct relationship to other CRS programs. Youth groups, such as boy scouts, and religious groups are common recipients.

TABLE 5.1

FFW Projects in Upper Volta Under CRS Program
August 1979 - December 1980

	<u>Number of Projects*</u>	<u>Percent</u>
A. Construction of Buildings related to other CRS programs (dispensaries, PMIs, schools and staff residence)	216	(29)
B. Water related projects (wells, dams, market garden)	250	(34)
C. Other projects		
1. Construction of Buildings	106	
2. Reforestation	49	
3. Fish Ponds	4	
4. Roads	33	
5. Training	85	
Subtotal	<u>277</u>	(37)
TOTAL	743	(100)

The accompanying map shows the geographic distribution of projects approved between August 1979 and December 1980. There is clearly a heavy concentration of projects (86%) in the four departments of Center, Center Nord, Center Ouest and Nord. These areas do contain the heaviest concentration of population, and community action is a strong part of the tradition of the people in the area. In addition, the fact that recipients must cover transport costs makes FFW less attractive to villages that are some distance from Bobo-Dioulasso and Ouagadougou.**

5.4 Program Beneficiaries

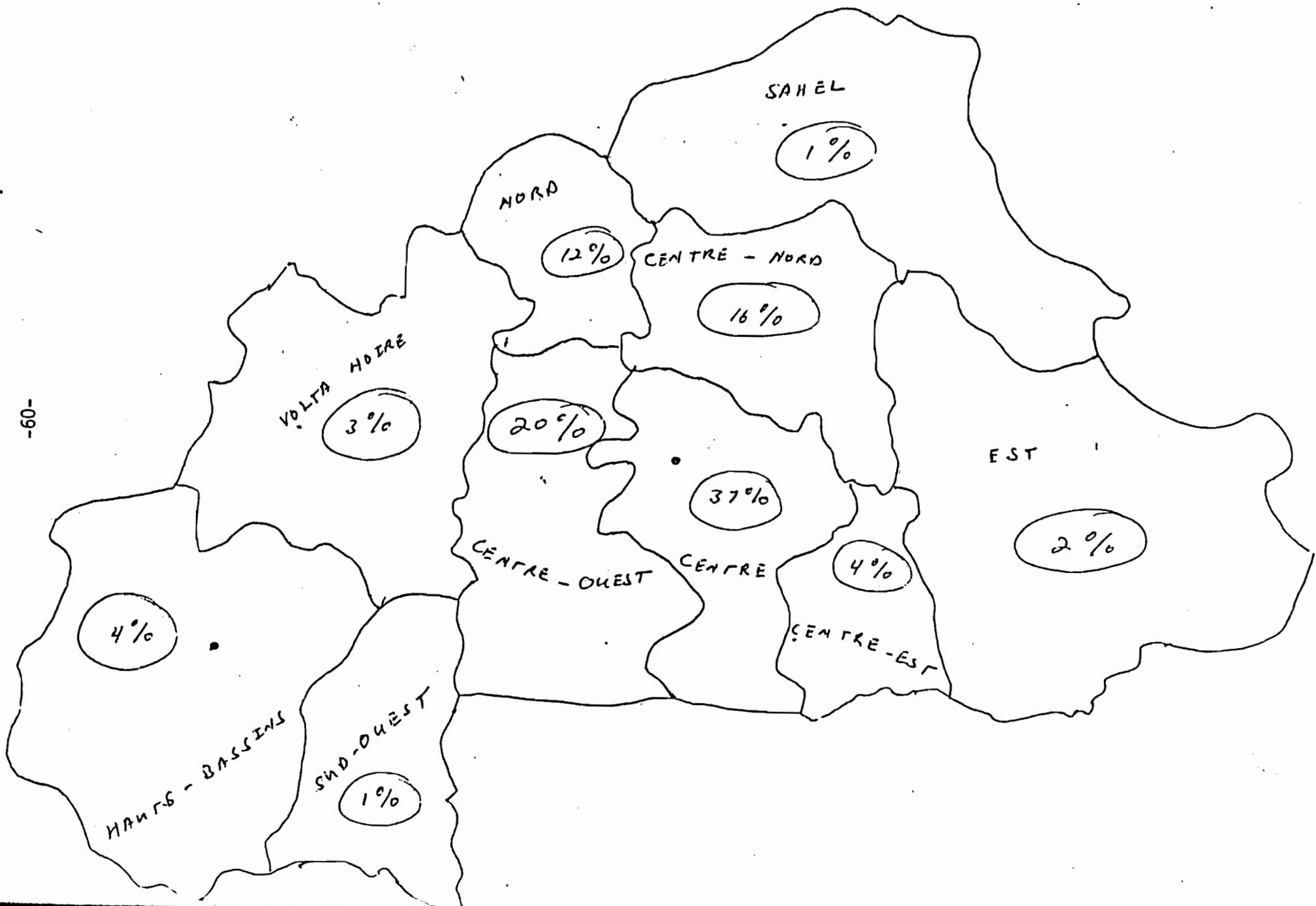
The CRS briefing document estimates that 30,000 workers participate in FFW projects annually. It is impossible to check this figure, although it is the impression of the evaluation team that the figure may be considerably higher.

The length of time individual workers participate in the projects and the duration of projects varies considerably. In the case of reforestation projects, all the planting may be done in a single day. Construction projects may

* Totals include a few projects (probably about 10) in the Bobo-Dioulasso sector that were initiated between January and July 1979.

** Approval of FFW projects in the Bobo sector was suspended for several months in 1980 due to shortages of staff and food.

FIGURE 5.1 Distribution of Food for Work Projects, CRS/UV, 1979-80



take considerably longer, but with individual workers only participating once or twice a week. No instances were encountered in which the same individuals worked five or more days a week for several months running.

It was not practical to try to estimate labor productivity on FFW projects. It appears to be very low for those few projects visited where work was actually in progress. Those responsible for the project generally tried to get a lot of people out each day to give as many people as possible a sense of participation, and to make sure there were enough workers. As a consequence there were often more people to do the work than work to be done on a particular day.

The overwhelming majority of participants in FFW projects are men. Some women participate in such tasks as carrying water, as well as with the actual preparation of the food when it is prepared and distributed on site.

CRS has not made any systematic attempt to relate the approval of FFW projects and the release of food to the slack labor period. In theory, this would be desirable, but in practice it is often difficult for villagers to make all the necessary arrangements to execute a project so that the work falls in the slack labor period. Also some projects, such as reforestation, are properly carried out during the regular farming season. Villagers at some of the projects visited stated that they started the project whenever all the necessary materials and technical assistance were available, which sometimes did not coincide with the slack labor period.

CRS utilizes general rules of thumb for determining the amount of food approved for specific projects. In the case of training programs, the monthly ration per participant is 9 kilos of rice and 1/2 kilo of vegetable oil. Food is allocated to FFW projects on the basis of a one 45 kilo sack of rice and 2 1/2 kilos of vegetable oil per person month of work required. Applicants submit specific requests for certain amounts of food which CRS adjusts according to past experience with FFW projects of a similar nature. Milk powder has also been given out for FFW projects and training programs on occasion. Corn flour has been given out in place of rice on occasion, but the School Feeding program generally has first call on available supplies of corn meal.

The values of the monthly rations for the training programs and FFW projects are \$34 and \$7 respectively, using Ouagadougou prices. Since most of the projects are within a 100 km radius of Ouagadougou, the figures are representative of most FFW projects.

Most projects visited did not distribute a fixed ration per se to workers for them to take home. Rather, food was prepared in bulk on site and eaten either during or after the work. The number of workers would often vary from day to day, depending on the work to be done and how many workers appeared, but it was often reported that the same amount of food was prepared, usually one or two sacks of rice per day, regardless of the exact number of workers on a given day.

Other projects, notably those visited in the Fada region, distributed food to participants to take home. In some instances the food was given in bulk at the time of the completion of the project. In other instances, the food was given daily or weekly. One project distributed take home food in bulk every two

or three weeks and also prepared a meal on site every Saturday. In nearly all instances it was extremely difficult or impossible to determine exactly what quantity of food was being given out in return for a given quantity of work performed. Workers who simply showed up at the site to work, but who performed little or no work, possibly because there were too many workers that day relative to the work to be done, might receive food.

Since work was performed in shifts in many instances, with groups of workers coming from different sections of a village or different villages once or twice a week, it is unlikely that the food received by individual workers amounted to a very significant part of their total income in the majority of cases.

Only two projects reported that money wages were paid to workers in addition to food. In one instance workers were paid 300 CFA per day in addition to receiving a ration of food. As 300 CFA is approximately equivalent to the level of wages for agricultural labor in the area, food made the total wages higher.

5.5 Organization and Management

5.5.1 Selection of Projects

Historically, CRS has utilized a variety of criteria as required by the conditions in the country (the presence or absence of a drought situation), and the operational philosophies of CRS staff. At the present time, priority is given to projects that conform to one or more of the following criteria:

- 1) projects that support other CRS programs such as construction of schools, PMIs and/or dispensaries,
- 2) projects that address the severe problem of water that exists in Upper Volta, such as projects for surface wells, borehole wells (forage), dams, and small water catchments,
- 3) projects that correspond with the policies and priorities of the GOUV.

The actual sequence of events involved in the selection of FFW projects runs as follows:

- 1) A village group/NGO/Government Organization puts forward a request to CRS for assistance.
- 2) In the case of village groups, the request must pass through the office of the local sub prefect for review and endorsement.
- 3) CRS reviews the projects, requests additional information, if required, and time permitting (not usually possible) makes a site visit. In some instances representatives of a village group agency visits CRS to present the request in person and are available to discuss the project.
- 4) CRS, namely the Director in consultation with those most directly responsible for the FFW program, screens the proposals. Consideration is also given to the past performance of the applicants, if known.

5) If a project is approved, CRS calculates the amount of food required on the basis of the estimated number of person days required for the work and the ration per day, and then informs the applicants that they can collect the food. Food is normally only given for a three month period. In the event that more time is needed and the parties involved wish to have more food, a re-application must be made.

5.5.2. Management of FFW Projects

The management of FFW projects was examined at three levels - CRS, village groups, and other groups or organizations (governmental and non-governmental) involved in the project in some capacity.

The distribution of FFW commodities to project sites is arranged by those responsible for the individual projects. In contrast to the system of end use checking for the infant and school feeding programs, there is no attempt by CRS to systematically check on what happens to the food after it leaves the CRS stores. Sometimes reports are received on individual projects, but this is not usually the case. More commonly CRS will simply receive a note of thanks indicating the work has been completed.

Each FFW project has one or more individuals or groups who have formal responsibility for the project as far as CRS is concerned. "Les responsables" as they are collectively designated include i) chiefs or leaders of village groups; ii) officials or staff members of governmental or non-governmental institutions including administrative cadres (sub prefect), directors of ORD, and personnel from a variety of non-governmental organizations, both secular and religious. Applications for assistance are normally submitted by "les responsables" directly or via the appropriate official channels. They manage the projects directly themselves or at least oversee the management. "Les responsables" may be the initiators or animators who take the leadership in initiating the ideas for projects at the village level and in making arrangements for the necessary support, including FFW; financial support for purchase of materials, and technical assistance. They will commonly be involved in arranging for the complementary support which may include financial contributions from villagers themselves and/or external organizations.

Those "responsables" who are living and working in the towns often hold good jobs in government or the private sector and wish to do something for their home villages. Such groups are often effective in securing the necessary support from various governmental and non-governmental sources (including taking up collections among themselves) since they know how and whom to contact. At the same time, such arrangements have the disadvantage that the village residents themselves may not feel the same level of commitment to the project or even understand completely what is going on. One project was visited where virtually all the support was being provided from the outside. Work had stopped for a few weeks even though the necessary labor and technical services (in this case a mason) were available. The villagers were content to wait for relatives in the city to find the necessary support for the additional materials required and to come to the village to oversee the remaining work.

A common difficulty experienced by the projects visited was that of putting all the components together at the right time and in the right proportions. For example, the FFW commodities may have been delivered to the site, but the finance for the materials was not obtained or the necessary technical assistance may not be available.

Arrangements by which individuals and/or organizations (either governmental or non-governmental) serve as intermediaries between village groups and sources of support can be quite effective, especially if such involvement is built upon substantive village level support for an undertaking, rather than being a substitute for such support. In one instance, different villages in one area submitted one request for assistance in well construction through the local Catholic mission. The local father combined the requests for support to CRS; helped make arrangements for the complementary support; engaged the mason, and generally oversaw the progress of the work including the distribution of the food. Similarly, a non-governmental Voltaic organization, "Six S", is responsible for several FFW projects to construct wells and enclosures for market gardens in several villages in one region. Six S was responsible for making the request to CRS for FFW support on behalf of the villages and is assisting the village groups with the execution of the projects.

There was considerable difference of opinion on the extent to which it was necessary and desirable to formally involve government agencies in the management of FFW projects. CRS currently requires that all proposals submitted from villagers must be endorsed by the local sub prefect and looks to him to determine and advise if and how other government agencies might be involved. Central ministries and regional representatives of these ministries, including the offices of the ORD in each region, do not feel they are properly consulted or kept informed in all instances. In contrast to the CRS FFW program, all resources from WFP for FFW are channeled through government agencies, specifically the Ministry of Rural Development in the first instance.

Technical management of a project is also an important ingredient of many FFW projects. The manner in which CRS FFW projects are currently screened provides no assurances as to the quality and availability of technical support services. In many instances, including most of the projects visited, technical supervision was provided by a mason who was employed for the project by the villagers or provided by another agency. In one instance, the mason was a resident of the area and was donating his time. Such technical assistants are normally paid a money wage either by the villagers or by the participating agency. The quality of such services varies appreciably. Some simple structures were well built, others were less so. Considerable variation in the quality of well construction and other water projects was particularly evident.

Some projects, such as water projects, require more in the way of technical support services than others. Simple construction projects, such as school buildings put up according to a standard plan, require very little technical expertise which can easily be provided by an experienced mason. This type of project probably has a better chance of success given the very limited supervisory capacity of the FFW program.

Some projects, such as market gardens and reforestation, require continuing attention after the initial phase of construction (or planting in the case of reforestation). In the case of projects that have direct economic benefits to participants, the problem is not lack of interest in participating, rather one of allocating the limited space in the garden in a somewhat equitable manner among participants; getting technical assistance on a regular basis to advise on what to grow and how; and having some mechanism for acquiring the necessary purchased inputs and marketing output. The Six S projects in the Ouahigouya area are assisting village groups (called "groupements NAM") in the operation of market garden projects on a continuing basis. Other market garden projects appeared to be having problems with operating the project after the construction phase, in one instance because the irrigation facilities were incorrectly located and in another case because of problems with marketing. One village group was attempting to raise silk worms in response to an advertisement for silk worm eggs which they had received. The viability of such an enterprise appears doubtful, at best.

Reforestation projects exhibited a set of problems that suggest they may not be well suited for inclusion in a relatively unsupervised FFW program such as found in Upper Volta. The villagers should receive some advice as to the siting of the trees and varieties to be used. Second, the transplanting should be done at the beginning of the rainy season to facilitate establishment before the dry season. Third, there should be some follow-up maintenance, including weeding, watering and protection from pests. In a number of instances, young trees were transplanted late in the rainy season since the work would otherwise conflict with normal farming activities, and no effort was made to maintain the trees after transplanting. As a consequence, many of the young trees do not survive the ensuing dry season.

5.6 Program Costs

The FFW program cost a total of \$1,681,000 during fiscal year 1980 of which 90% was accounted for by the value of the commodities and the international transport. (See Appendix C for details). The cost figures do not include the expenses for materials and labor, which are paid for by the villagers themselves or other groups. These expenses are considerable, but given the large number and variety of projects, no practical means was found to develop a meaningful estimate.

Using the partial cost figures and the CRS estimate of numbers of participants, the cost per beneficiary is \$56.04. For a number of reasons, this figure is not felt to be particularly meaningful. The complementary costs of materials and labor are not included and the number of participants is a crude estimate.

5.7 Conclusions and Recommendations

The major strength of the FFW program of CRS is its ability to provide support rapidly to a wide variety of initiatives, the majority of which come from villages themselves. In most instances the projects appear to represent what villagers themselves wish to do and place a high priority on doing. This is also a major reason why the program has, over the past few years, lacked any coherence, and it has made it impossible for CRS to more than nominally follow the progress of most of the individual projects under the program.

The willingness of CRS to consider a wide variety of requests coming from diverse sources in the past has made the task of simply reviewing the requests in any systematic fashion almost unmanageable. It has also left the door open to unwanted pressures from various quarters for assistance. The small size of CRS' program in terms of total amount of food involved has served as some protection in this sense, but a more coherent set of criteria, would be preferable. The current CRS administration has made considerable progress in this direction by establishing a set of priorities and by refusing to consider certain types of projects in which it believes the FFW program has not performed particularly well, notably reforestation projects.

Given the nature of the program, it is possible, even probable, that some of the supplies given out for FFW projects are misused. Unsubstantiated reports to this effect were encountered by the team. The small size and large number of projects makes it impossible to avoid misuse altogether.

The scope of CRS's program has also led to criticisms from government agencies. In particular, they feel that they are not properly informed of the specifics of the program. Given the variety of channels that CRS utilizes in dealing with requests for assistance, there is no one government agency which has a clear overview of the program. CRS does submit reports periodically to the government, but these provide only a rather cursory overview of the program. With the very limited staff resources available for the program, CRS is not currently in a position to provide a great deal more in the way of information on the program or on individual projects.

CRS is now attempting to considerably sharpen the focus of its FFW program, concentrating on projects, such as the construction of schools and PMIs, which relate directly to CRS's other program areas. Also in the case of other priority projects, notably the water and water related projects, CRS is exploring mechanisms to assist village groups in assuring the necessary complementary inputs, namely the materials and technical assistance. This need not involve additional inputs from CRS's side, but merely making release of food conditional upon receipt of some evidence from the village group that these other inputs are available.

The brief time available for the evaluation made it impossible to explore the impact of FFW on dynamics of group action at the village level to any satisfactory extent. Team members invariably received reports of how much the supplies had encouraged the villagers, but it is difficult to imagine receiving negative reports under the circumstances in which the visits to project sites were carried out.

The evaluation team wishes to express a general concern over the role of FFW commodities in stimulating community action at the village level. It is clear that a number of projects using FFW have been successfully completed and that villagers in general are very appreciative of the assistance given. However, the role of FFW supplies in the whole process is debatable. If villagers have anything to contribute to a community development effort it is their own time. The more critical needs are financing for materials and technical assistance. FFW can serve to encourage villagers to get together for a particular project, but it can also have the effect of discouraging them from making free contributions of their own time in the future. In short, villagers might develop a "cadeau" or gift mentality which might actually impede the execution of community development projects in the future.

FFW projects that are likely to be successful in the context of the very loosely structured CRS program are those which are both simple to execute and are high priority in the minds of the villagers themselves. One can seriously question the need for food in such instances. FFW has been used in other countries to provide wages in kind to workers participating in projects that are often larger in scale and perhaps with less immediate benefit to individual villagers; food would thus be an important inducement. A road or dam construction project might be of this nature. Such projects also require considerably more technical and managerial supervision than characterizes the FFW program in Upper Volta. In some instances this supervision is, or can be provided by other governmental or non-governmental agencies with promising results, but often considerable staff effort is required to make the necessary arrangements.

CRS is in the process of increasing the staff time allocated to FFW and to further structuring the program so as to improve both the selection and monitoring of individual projects. These efforts are commendable and necessary if the program is to continue, but they carry with them additional expense and delays in the processing of applications. CRS will be less able to respond rapidly to a wide range of initiatives from the village which was one of the most attractive features of the program in the past.

(1) Given the relatively small size of the program and the problems, as well as the expense involved in significantly improving the operations of the FFW program, we recommend that the program be terminated. The nature and structure of the program make it amenable to abuse. Such abuse, or even just the suggestion of such abuse, can be used to discredit the entire CRS program in Upper Volta. Further, given the priority assigned to the preschool and School Feeding programs, and the fact that both programs are likely to require additional inputs of staff time and commodities in the future, there is doubt in our minds whether major efforts should be made to restructure FFW.

(2) If it is decided to continue the program, there are a number of improvements in procedures which we believe will enhance its effectiveness. Most of the following suggestions emerged in the course of discussions with CRS and representatives of various GOUV ministries, and some of them are currently being implemented by CRS.

(2-1) We endorse CRS's efforts to a) narrow the scope of the program; b) precisely define criteria focusing upon projects that complement CRS's other programs; and c) modestly increase the staff allocated to the program.

(2-2) We suggest that the size of the program be kept small. To some extent the program might continue to be used as a balancing item in CRS's total program of food aid since it can be more readily expanded or contracted. Toward this end, CRS might seek to identify a range of projects that can be activated at fairly short notice as and when supplies are available and/or as it appears desirable for drought relief reasons.

- (2-3) As CRS reviews its procedures for screening project proposals, it is suggested that consideration be given to (i) helping ensure that projects have access to the necessary complementary inputs and (ii) keeping the appropriate government agencies informed of the proposed projects.
- (2-4) CRS should consider limiting the period in the year in which applications are processed and food released, with a view to focusing on dry season activities and reducing staff time currently consumed in receiving applicants. One possibility would be to process applications only during the period March through September and release food only from September through March. CRS staff involved in FFW might then devote significantly more time to visiting projects in progress during the dry season. Exceptions might be made in the case of training and drought relief programs. It is appreciated that these measures would somewhat reduce CRS's ability to use FFW as a balancing item in its total program.
- (2-5) The agreement between CRS and the applicants should be in the form of a legally binding contract by which the applicants agree to perform certain tasks in return for the receipt of a certain quantity of food. Failure to complete the project as specified would obligate the applicants to return all or a portion of the food, or its equivalent value. While it is not practical to consider enforcing such an agreement in all instances, the procedures will serve to impress the seriousness of the undertaking upon the participants and help ensure that arrangements are made for the complementary inputs as required before the contract is formally signed.
- (2-6) CRS, possibly in collaboration with WFP and the Ministry of Rural Development, might explore ways of better understanding the impact of FFW upon community action at the village level. This might be carried out in the context of one or more of the village level studies presently in progress in various parts of the country.
- (2-7) The Food for Peace program worldwide might reconsider the definitions of misuse in the context of FFW projects. Officially, no food should be resold, but there are at least two reasons why this is illogical in the context of the FFW program in Upper Volta.
- i) workers receiving a ration of rice as payment can increase the caloric value of that ration by over 85% by selling the rice and buying sorghum or millet.*
 - ii) projects that are halted due to a lack of funds to buy materials might be able to generate some of the necessary funds through the sale of FFW commodities, and thus restart the project.
- (2-8) The cost of the program in terms of the value of the commodities can be reduced by the substitution of sorghum or maize for rice.

*At current market prices in Ouagadougou (Feb. 1981) rice cost 150 CFA per kilo and sorghum 80 CFA. It is likely that sorghum and millet are even less expensive relative to rice in most rural areas.

APPENDIX A: SCOPE OF WORK



International Science and Technology Institute, Inc.

December 5, 1980

PL 480 Title II Food Aid Program/Upper Volta: Evaluation

THE SCOPE OF WORK

(The following Scope of Work was agreed upon by USAID/UV, CATHWEL/UV and the Evaluation Team Leader, and reviewed with FFP/W and CRS/NY)

A. Evaluation Outline

1. SETTING

1.1 Food and Agriculture

A brief description of estimated past, current, and projected trends of national and per capita food production and consumption and an analysis of the situation with regard to food self-sufficiency. A brief review of the implications of these trends for nutrition.

1.2 Nutritional Problems

Major nutrition problems of UV -- both chronic and acute, their geographic distribution, and underlying socio-economic and environmental factors.

2. POLICIES

2.1 Development Priorities of the GOUV

Governmental priorities relating to food and agriculture, nutrition, health, education, and community development, and the justification for food aid within that context.

2.2 Goals and Objectives of the FFP Program

Identification of the goals and overall objectives of the FFP program from the point of view of GOUV, USAID, and CRS, and their congruence and divergence.

APPENDIX B: DATA COLLECTION INSTRUMENTS

Draft: 12/8/80
B. Stephens

FFP/Title II Evaluation: Upper Volta

GUIDELINES FOR DISCUSSIONS WITH GOUV OFFICIALS

1. What do you believe are the major causes of malnutrition in Upper Volta? (total production levels? deficiencies in the production levels of certain types of food? distribution problems? poverty? ignorance?)
2. Which of Upper Volta's development policies should have a direct or indirect effect on improving the nutritional status of the Voltaic people?
3. What are the strategies of the GOUV for increasing food production and improving food distribution mechanisms? What success is the GOUV having? What special problems have been encountered?
4. Is there presently any coordination of policies and programs that affect nutrition? Do you believe that the GOUV is likely to establish an inter-ministerial nutrition planning group that would be responsible for this kind of coordination? Do you believe it would be useful or not useful in improving nutrition in this country?
5. In what ways does the CATHWEL food and nutrition program (distinct from other food aid programs) contribute to development and the well-being of the people?
6. Are there any negative effects or special problems connected with the CATHWEL food and nutrition program?

Draft 12/12/80
B. Stephens

FFP/ Title II Evaluation, Upper Volta

Ticklist of information to be obtained from USAID/ Upper Volta

1. What does USAID believe the objectives of the FFP/CATHWEL MCH, SF, and FFW programs are? should be?
2. In what ways is the FFP/CATHWEL program meeting or failing to meet those objectives?
3. Are USAID's objectives for FFP the same or different that CATHWEL's objectives? and those of the GOUV?
4. How does the FFP program fit into the Country Development Strategy, as defined by USAID? by the GOUV? In what ways does FFP contribute to or inhibit development in Upper Volta?
5. In what ways does FFP/CATHWEL contribute to or inhibit self-reliance in Upper Volta?
6. What control does USAID have over the CATHWEL program? Should there be more or less control? Why?
7. Describe the outstanding strengths and weaknesses of the FFP/CATHWEL program.
8. What is the budget of the Generic Grant? Has the Generic Grant contributed to the FFP program?
9. What is the potential for and advisability fo the FFP, MCH, SF programs being taken over by local institutions?
10. What are USAID's criteria for determining the size and scope of the FFP/CATHWEL annual programs?

Draft: 12/1/80
B. Stephens, ISTI

FFP/Title II Evaluation, Upper Volta

Ticklist of information to be obtained from CRS/UV

1. What are the objectives and/or expectations of the MCH, SF and FFW programs? (Quantitative & qualitative)
2. To what extent is each of these programs achieving it's objectives/expectations?
3. In what ways, if any, are the programs constrained by AID policies, regulations, or enabling legislation? By GOUV policies or regulations? Other?
4. Describe how contributions from other donors relate to and affect the FFP/CATHWEL Program?
5. What is CRS/UV policy and expectation regarding the potential takeover of the FFP program by Voltaic institutions?
6. How many staff positions are there in CATHWEL/UV? What are they? Are they filled/unfilled?
7. What supervisory support/control does CATHWEL provide to the MCH, SF and FFW programs? Cite the strengths of CATHWEL management and special problems.
8. What are the criteria for determining the total size of each of the programs?
9. What is the total number of distribution points (PMI Centers and schools) in the program? List the controlling agencies.
10. How many of the centers and schools currently use the Growth Surveillance System and over what period of time was it introduced into the centers?
11. What are criteria for selecting distributing centers for the MCH and SF programs?
12. What are the criteria for identifying target groups and selecting recipients for the MCH programs? (Age, sex, socio-economic, geographic, other) To what extent do these criteria vary among the centers?
13. What is the total number of recipients in the MCH and SF programs?
14. Describe generally, and to the extent possible, each program, in terms of the recipients': age, and sex, where relevant; nutritional status; socio-economic status; geographic concentration; year of enrollment; regularity and total months of attendance.

WEL's

15. What pre-service and in-service training do center/school staff receive? (Topics covered, educational approach)
16. What promotional activities are supposed to take place in the centers/schools? How successful is the health and nutrition education and how much does it vary among the centers?
17. What are the specific values of the Growth Surveillance System to the program, management, and evaluation of the PMI and SF programs? What are the drawbacks?
18. How many FFW projects are there? Under what auspices do they fall? What is their duration? What types of projects are they? What proportion of the total wage is the FFP ration?
19. What are the criteria for selecting FFW projects?
20. How many recipients are there in FFW? What is the variation on length of participation?
21. What are the reporting requirements for FFW?
22. What are the costs (in cash and kind) of each of the programs (MCH, SF, FFW)? How much of the budget is provided by USAID, CRS, GOUV, non-governmental organizations, beneficiaries, others?
23. Do the commodities arrive on schedule in Upper Volta? Do they arrive in good condition? Are there differences in the reliability and condition of the individual commodities?
24. How does CATHWEL manage and control the distribution of commodities to the distribution points? What effect has the Outreach Grant had?
25. Describe the current ration in terms of size and composition (including nutrient content). How does the ration vary for the MCH, SF, and FFW programs?
26. In what ways, and when, have the size and composition of the ration been changed?
27. What are the functional and attitudinal relationships between relevant GOUV ministries and CATHWEL, and among the relevant ministries, in relation to the FFP program, centrally and in the field?

[ISTI: , 12/19/80]

Date:

Observer:

Staff Member(s):

FFP/Title II Evaluation, Upper Volta

Tick list for observational visits to FFP/PMI Centers.

1. IDENTIFICATION

1.1 Name of Center:

1.1.1. How many years has the center participated in FFP?

1.1.2. How long has the Center been using the growth surveillance system?

1.2. Controlling Agency:

1.3. What is the current ration? How long has the Center distributed this ration?

1.4. Location (describe briefly distinguishing socio-economic characteristics of the area).

1.5. What other services are offered in the Center? Are they integrated with, or separate from the FFP activities? Do mothers have access to these services?

1.6. If vaccinations or niquine are provided at the Center, approximately what proportion of the recipients benefited from these services in the last year? If not, how far is the nearest health center? Are these services always available?

2. FFP DISTRIBUTION

2.1 Total number of recipients

2.1.1. Children under 5

2.1.2. Women of reproductive age

2.2. How many sessions are there per week? (including mobile services)

2.2.1. Number of recipients per session?

2.3. What are the criteria for accepting and graduating recipients?

2.4. What is the procedure for enrolling new recipients? Does the mother have to agree to certain conditions to be accepted into the program? If so, what are they? And do the mothers usually understand them?

2.5. Do mothers usually know the age of their children? If not, how do you determine the age?

2.6. What are the maximum/minimum number of rations per family? What are the criteria for deciding which members of the family should enroll?

2.7. What steps are taken if the nutritional status of a child in the program begins to deteriorate?

3. PERSONNEL

3.1 How many persons work with the nutrition program?

3.2 What are the responsibilities of each one?

3.3 What is the background of the staff? (Schooling and work experience)

3.3.1. How are the staff recruited? Are they from the local community?

3.4 What special training has each member of the staff had to prepare him/her for working with the nutrition program? (Pre-service, in-service, on-the-job)

3.5 How often does someone from the CATHWEL staff visit the Center?

3.5.1. What does the CATHWEL staff person do when she visits the Center?

4. LOGISTICS

4.1. Does the Center always have an adequate supply of commodities? If not, why not?

4.2 Do they arrive in good condition? Is there any spoilage after arrival?

4.3. Are the storage facilities in the Center adequate? If not, explain.

4.4. How does the Center account for the commodities it receives and distributes?

5. OBSERVATION

5.1. What is the sequence of events for individual participants in a session?

5.2. Describe the promotional activities:

(a) Discussion with individual mothers

(b) Group education.

(c) Cooking demonstrations (use of FFP and home foods)

5.3. Describe the weighing activities:

(a) Accuracy of the scales

(b) Accuracy of the weighing (child weighed with/out clothes?)

(c) Recording on individual and master charts

(d) Action taken in case of weight loss

5.4. Describe the distribution of rations

(a) Procedures

(b) Consistency and accuracy of the measurements

(c) Mother's payment

6. GENERAL COMMENTS

[ISTI: 12/19/80]

Date:
Observer:
Staff Member(s)

FFP/Title II Evaluation: Upper Volta
Tick List for Observational Visits to FFP/SF Schools

1. Identification
 - 1.1. Name of school
 - 1.1.1. Type of school (academic, agricultural, etc.)
 - 1.2. Controlling agency (MOE, Other - specify)
 - 1.3. Location
 - 1.3.1. Distinguishing characteristics of the area:
 - 1.4. Length of time school has participated in FFP?
 - 1.5. How many beneficiaries are in the SF program?
 - 1.5.1. Does that include all children in the school? If not, what are the criteria for accepting and graduating children from the program?
 - 1.5.2. What is the age range of the children?
 - 1.6. Length of time school has been using the Growth Surveillance System?

For Schools Using the GSS:

- 1.6.1. At the time the children are first weighed, are the parents told about it? If so, what are they told:
- 1.6.2. What steps, if any, are taken if the nutritional status of a child is very poor or begins to deteriorate?
- 1.7. Is there a nutrition education program in the school? If so, describe it.

2. Logistics

- 2.1. Who prepares the food?
 - 2.1.1. Are they paid? If so, where do the funds come from?
- 2.2. Does the school always have an adequate supply of commodities? If not, why not?
- 2.3. Do the commodities arrive in good condition?
- 2.4. Are the storage facilities in the school adequate? If not, explain.
- 2.5. How does the school account for the commodities it receives and distributes?

3. Opinion

- 3.1. If there were no school feeding program, what would most of the children eat on school days? (How many meals a day? Size and composition of those meals?)

- 3.2. What do most of the children in the school feeding program eat in addition to their school lunch?

- 3.3. What are the usual causes of absence in the school?

- 3.4. Is there any noticeable change in attendance since the school feeding program began? Why?

- 3.5. What are the most common health problems of children in the school?

- 3.6. In what (other) ways is the school feeding program beneficial?

- 3.7. What are the negative effects of the school feeding program? What suggestions do you have for improving the program?

[ISTI: 12/19/80]

FFP/Title II Evaluation: Upper Volta
Tick List for Observational Visits to FFW Projects

Date:

Name of Observer:

1. Identification

1.1. Name of Project:

1.2. Location (describe distinguishing socio-economic characteristics of the area):

1.3. Controlling organization (describe briefly the nature of the organization):

1.4. Nature of the project:

1.5. Duration of the project (Total? Until now?):

1.6. Objectives of the project (achievements anticipated):

1.6.1. What has already been achieved?

1.6.2. Are any problems anticipated that will inhibit the achievement of project objectives?

1.7. Who first conceived of the project? And why? What was the involvement of the community? Why did they apply to CATHWEL for assistance?

1.7.1. Who prepared the proposal which was submitted to CATHWEL?

1.7.2. How long did it take to get approval from CATHWEL?

2. The Participants

2.1. How many participants are there? (males? females?)

2.2. What is the duration of individual participation? How many hours do participants work per day? (Is this consistent?)

2.3. What kind of commitment do participants make? (Do they have contracts? Do they come by the day? etc.)

2.4. How were participants selected? (Are there more applicants than jobs? Can more than 1 member of a household participate?)

2.5. How far away from the project site do the participants live? (The furthest away? The majority?)

2.6. What would the participants be doing if they were not working on the project?

2.7. Do the participants and their families have anything to gain from project achievements?

2.8. Do the participants learn anything that they can apply elsewhere?

3. The Food Distribution

- 3.1. What is the size and composition of the ration?

- 3.2. What is the economic value of the ration and what percentage of the total wage is it?
 - 3.2.1. How does the total wage compare to local wages for similar work?

- 3.3. How frequently do the participants receive the food rations? (Are they received at the same time as the rest of the wage? Is it always a take-home ration?)

- 3.4. Is the delivery of commodities reliable so they are always available for distribution on schedule?

- 3.5. What is the procedure for distributing the rations to the participants?

- 3.6. What is the attitude of the participants toward the food ration? (Would they have agreed to do the work without the incentive of food? Would they prefer a different kind of payment? Is the composition of the ration satisfactory?)

- 3.7. What do participants usually do with the food ration? (Do they sell it? Trade it? Take it home?)

4. Management

- 4.1. How is the project managed? Who selects the participants? Who has the responsibility for: technical aspects of the work? The labor force? Paying the participants? Receiving and distributing the food? Payment of other wages?

- 4.2.1. Is there any outside supervision of the project? By CATHWEL? By a government agency? Other?

- 4.3. How does the project account for the commodities it receives and distributes? What records are kept? What reports are submitted to CATHWEL? And how frequently?

- 4.4. How are commodities stored pending their distribution to participants? Are the storage facilities adequate? If not, explain.

5. Budget

- 5.1. What is the total budget of the project? (Including monetary and in-kind resources)
 - 5.1.1. What is provided by the controlling organization?

 - 5.1.2. What is provided by CATHWEL?

5.1.3. What is provided by the community?

5.1.4. What is provided by the participants? (This would include the difference, if any, between the wage received and comparable local wages.)

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6. Effects of the Program

6.1. What assets have been or will be created by the project and who benefits?

6.2. What are the benefits and negative effects of the project on participants, the families, and other members of the community?

6.3. What is the role of the project as an incentive or disincentive to community organization and self-help?

7. Observations and Comments

(ISTI: 12/19/80)

Date:
Observateur:
Personnel

Evaluation du Project FFP/Titre II: Haute-Volta

Directives concernant l'entretien avec le personnel du centre de distribution FFP:

1. Comment deciriez-vous la plupart des meres qui viennent au centre?
S'agit-il des membres les plus riches/pauvres de la collectivite? Ces femmes ont-elles plus/moins d'instruction et d'experience acquise en dehors du village? Certaines ont-elles une profession en plus de leurs taches domestiques habituelles?

2. Pourquoi certaines meres viennent-elles au centre, et d'autres pas?

3. Le domicile des meres les plus eloignees se trouve a combien de kilometres du centre? D'apres vous, quel pourcentage des familles qui habitent dans ce rayon viennent au centre?

4. Que suggerez-vous pour ameliorer la composition de la ration?

5. Comment conseillez-vous aux meres de preparer la ration chez elles?
Le lait NFDM? La farine de maïs? L'huile?

Page 2

6. Par quels aliments locaux la ration pourrait-elle être remplacée ?
7. A partir de quel âge les mères devraient-elles commencer à donner d'autres aliments en sus du lait maternel ? Quels aliments recommandez-vous ?
8. Quels soins enseignez-vous aux mères quand leurs enfants ont la diarrhée ?
9. Quelles sont les maladies les plus communément répandues chez les enfants de la région ? Que conseillez-vous aux mères lorsque leurs enfants sont malades ?
10. Quels vaccins devraient être inoculés aux enfants ?
11. A votre avis, quels sont les points positifs du programme Gathwal (pensée, causerie, démonstration et distribution) et quelles améliorations peut-on y apporter ?
12. Qu'est-ce que vous faites quand le poids de l'enfant baisse régulièrement ?
13. Est-ce que vous rendez visite aux mères chez elles ?

Autres commentaires :

ISTI : 12/19/80

Date :
Nom du centre :
Nom de l'enquêteur :

Evaluation du Projet FFP/Titre II:Haute-Volta
Directives concernant l'entretien avec les participantes

1. Combien d'enfants avez-vous ?
Quel âge ont-ils ?
2. SES : Que faites-vous en saison sèche et en hivernage ?
Que fait votre mari ?
Combien de champs a votre mari ?
Avez-vous une petite parcelle pour vous ?
Que cultivez-vous ? Qu'en faites-vous ? (consommation, vente)
3. Quand êtes-vous venue au centre pour la 1ère fois ? Pourquoi ?
4. Combien d'enfants amenez-vous au centre pour les faire peser ?
5. Y a-t-il des problèmes qui vous empêchent parfois de venir au centre ?
6. Vous arrive-t-il de venir au centre en dehors de vos jours de visite régulière ?
7. Pourquoi certaines mères viennent-elles au centre et d'autres pas ?

8. Viendriez-vous au centre s'il n'y avait pas de distribution alimentaire ? Pourquoi ?

9. Combien de bouches avez-vous à nourrir habituellement ?

a) combien de nourrissons ? _____

b) combien de jeunes enfants ? _____

c) combien d'enfants plus âgés ? _____

d) combien d'adultes ? _____

10. En général, combien de rations prenez-vous au centre pour emporter chez vous ?

Les aliments sont-ils toujours disponibles quand vous venez au centre ?

Dans la famille, recevez-vous des aliments d'un autre organisme ?

11. Comment préparez-vous la nourriture ?

a) La farine de maïs ?

b) L'huile ?

c) La poudre de lait ?

12. Que préparez-vous spécialement pour votre enfant ?

13. Combien de temps dure chacun de ces aliments ?

a) La farine de maïs ?

b) L'huile ?

c) La poudre de lait ?

14. Mettez une croix /X/ en face de chacun des aliments que l'enfant a mangés hier (Si la mère a plusieurs enfants inscrits au centre, posez la question pour le plus jeune)

Lait maternel

- Lait frais
 Lait en poudre
 Mil ou bouillie de mil
 Sorgho
 Maïs
 Farine de Maïs
 Fonio ou bouillie de fonio
 Riz ou bouillie de riz
 Igname ou patates douces ou manioc ou fabirama
 Pain
 Légumes (gombo, tomates, feuilles)
 Fruits
 Haricots ou bouillie de haricots ou pois de terre
 Arachide (cacahuète)
 Poisson séché
 Viande ou soupe de viande
 Sombala
 Oeufs
 Sucre ou autres sucreries
 Autres aliments (énumérez)
 Sésame

15 Est-ce qu'on a employé de l'huile ou du beurre de karité pour préparer la nourriture de l'enfant hier ? Si oui, dans quelle nourriture ?

[Revised: 3/13/81]*

Date:

Name of Center:

Name of Interviewer:

FFP/Title II Evaluation: Upper Volta
Guidelines for Discussions with Participants

1. Socio-economic status?

What do you do during the dry season and in winter?

What does your husband do?

How many parcels of land does your husband have?

Do you have any land yourself? What do you plant? Do you consume or sell your harvest?

2. When did you first start coming to the center? Why?

3. Are there any problems that sometimes prevent you from coming to the center?

4. Are there certain times of the year that it is more difficult for you to come to the center? If yes, why?

5. Do you ever come to the center on days when you do not receive food? Why?

6. What is most valuable to you about coming to the center?

*This is a revision of the questionnaire which was used in the field.

7. How many rations do you usually take home from the center? Is the food always available when you come to the center? Do you get food from another program?

8. How many people usually eat from your family pot?
 - a) how many infants? _____
 - b) how many preschool children? _____
 - c) how many school-aged children? _____
 - d) how many adults? _____

9. How do you prepare the food?
 - a) Cornmeal?
 - b) Oil?
 - c) Milk powder?

10. Who eats each of these foods?
 - a) Cornmeal?
 - b) Oil?
 - c) Milk powder?

11. How long does each of the foods usually last?
 - a) Cornmeal?
 - b) Oil?
 - c) Milk powder?

12. How old is the child you are bringing to the center?

13. Put an next to any of these foods eaten by the child. (If the mother has more than one child registered at the center, select child between 6 and 24 months).

Breast milk

Fresh milk

Powdered milk

Millet or millet broth

Sorghum

Corn

Cornmeal

Rice or rice broth

Yams or sweet potatoes or manioc or "fabriama"

Bread

Vegetables (gombo, tomatoes, leaves)

Fruits

Beans, bean broth, "pois de terre"

Ground nuts (peanuts)

Dried fish

Meat or meat broth

"Soubala"

Eggs

Sugar or other sweets

Other foods (list)

Oil

Shea butter

14. How many times did the child eat yesterday (other than breast milk)?
15. When and what did the child eat? (Try to find out about quantity).
16. Was the child given a bottle feeding yesterday?
17. How old was the child when you stopped breast feeding? (Question to be asked only if child is fully weaned.)
18. How early did you start feeding other foods in addition to breast milk? Which foods?

19. Put an next to any of these foods that were available in your home yesterday.

- Millet
- Sorghum
- Rice
- Corn
- Cornmeal
- "Fonio " or "fonio" broth
- Bread
- Yams, sweet potatos or manioc
- Fresh milk
- Powdered milk
- Vegetables (gombo, tomatoes, leaves)
- Fruits

Beans or "pois de terre"

Ground nuts

Dried fish

Meat

"Soumbala"

Eggs

Sesame

Oil

Shea butter

24.

25.

20. What can replace?

a) Cornmeal?

b) Oil?

c) Milk powder?

21. What are the most common illnesses among children in your village?

What do you do when your children are sick?

26.

22. How far do you live from a health center?

23. Have your children been vaccinated? If no, why not? If yes, which vaccinations?

24. How do you care for your children when they have diarrhea? (Differentiate between what is eaten/drunk and other remedies).

25. Does the mark made on your child's growth chart for today show that he weighs enough? Has the child grown/lost weight since the last time?

How has it changed since last time?

26. If your child does not weigh enough, what can you do for your child at home?

EVALUATION DES PROJETS D'INVESTISSEMENT HUMAIN
HAUTE-VOLTA

Questionnaire pour les participants aux projets
d'Investissement Humain

Nom du projet (village, type du projet) : _____

Date : _____ Nom de l'enquêteur _____

1. Où habitez-vous ? _____

Si vous habitez actuellement dans la zone couverte par le projet d'Investissement Humain, depuis combien de temps y habitez-vous ?

2. Quelle est votre (vos) occupation (s) (énumérez la plus importante en premier)

Occupation

Période de l'année
(plein temps, temps partiel)

a)

b)

c)

d)

3. Etes-vous le chef de famille ? _____

Si non, quelle est votre relation avec le chef de famille ?

4. Combien de personnes dépendent de votre soutien totalement ou partiellement pour leur subsistance ?

Lien de parenté

Soutien (total ou partiel)

a)

b)

c)

d)

.../...

5. Combien de jours (et d'heures par jour) avez-vous travaillé à ce projet et pour combien de jours y travaillerez-vous encore ?

6. Comment avez-vous obtenu cet emploi ?

7. Est-ce que vous avez eu des problèmes à obtenir cet emploi ? Quelle sorte de problèmes ?

8. Combien êtes-vous payé ?

Période de paie :

a) en espèces

b) en nourriture (décrire la ration)

9. Que pensez-vous d'être payé en nature ? (aliments)

10. A quelles fins utilisez-vous vos gains :

a) Gains en espèces

b) Gains en nature

11. Vous est-il arrivé de vendre les aliments ?

A qui ?

12. Si vous gardez les aliments, comment sont-ils apprêtés ?

13. Y-a-t-il eu des changements dans ce que vous mangez, depuis que vous avez commencé à recevoir des aliments ?

Que mangiez-vous auparavant que vous ne mangez plus maintenant ?

14. L'an dernier, que faisiez-vous à cette époque ? _____

Le faites-vous encore cette année ? _____

Plus ou moins ? _____

15. Si vous êtes cultivateur, avez-vous cultivé la terre :
plus ? _____
moins ? _____
la même surface cette année que l'an dernier ? _____

16. Quel est le but du projet sur lequel vous travaillez ? _____

17. Comment ce projet vous est-il (sera) profitable) ? _____

18. Comment le projet est-il (sera) profitable à la communauté ?

19. Avez-vous déjà travaillé au sein d'un type de projet semblable
auparavant ?

Comme volontaire ou étiez-vous rémunéré ? _____

20. Appartenez-vous à une organisation communautaire ? Quelle sorte d'organisation ? _____

21. Comment aidez-vous votre communauté ? (travail, argent, matériel)

22. Les villageois ont-ils décidé du type de projet d'investissement humain nécessaire ici ? Est-ce que les villageois ont discuté de ce projet avec l'administration ou d'autres organismes ?

23. Accepteriez-vous de travailler dans le projet même sans recevoir de rations alimentaires ?

24. Avez-vous d'autres commentaires sur le présent projet ?

25. Autres commentaires ?

APPENDIX C: PROGRAM BUDGET AND COST PER BENEFICIARY FOR 1980

APPENDIX CProgram Budget and Cost per Beneficiary Calculations for FY 80

The following budget and cost per beneficiary calculations for FY 80 cover both the costs of the commodities delivered to Upper Volta (Ouagadougou and Bobo-Dioulasso) as well as the internal costs (transport, storage, staff, etc.) from various sources. In a number of instances assumptions were made in order to produce a reasonably consistent set of figures and these assumptions may be subject to question. The most important assumption involves the adjustment of the total tonnage figures and the associated values to the total number of participants and the ration per participant. This was done by multiplying the ration for school feeding and preschool feeding programs times the number of participants in each. These calculations produced figures which were at variance with the tonnages and values indicated in the CRS briefing document as follows:*

	<u>RATION</u>		<u>CRS BRIEFING DOCUMENT</u>	
	<u>Tons</u> <u>(m.t.)</u>	<u>Value</u> <u>('000 US\$)</u>	<u>Tons</u> <u>(m.t.)</u>	<u>Value</u> <u>('000 US\$)</u>
MCH	6,096	4,347	8,640	6,704
SF	13,597	9,159	12,600	7,549

The calculation based on the ration and the number of participants is felt to be a more appropriate figure for purposes of calculating the cost per beneficiary. The figures provided by CRS/Ouagadougou may more correctly reflect actual expenditures, but may include an element of stocks (carry over) in the case of the MCH program, and the number of beneficiary months may have been over-estimated in the case of the school feeding program.

* it is expected that these figures will be reconciled for the final draft

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The budget for the preschool program includes provision for the salaries, transport etc. of Ministry personnel associated with the program pro rated for the time actually spent on the CRS program. Much of this time is devoted to weighing of infants, recording results, and the distribution of food - activities which would not take place without the CRS program. Time spent on nutritional education activities is also included on the assumption that attendance by mothers in such educational programs would probably be significantly less without the prospect of receiving a ration.

The figures for the Food for Work program utilized the tonnage and value figures provided by CRS in the briefing document (\$1,520,000 total). When the reported costs were broken down between transport and the value of the commodities another problem was encountered. Using a figure of \$278 per metric ton for the transport cost between East Coast port and Upper Volta, which is the actual average cost as reported by CRS for FY 80, the total transport costs for 3150 m.t. come to \$875,000. If one figures the value of the commodities as the residual, the value comes to only \$644,000 (\$1,520,000 less \$876,000) or \$204 per m.t. This figure is too low for the mixture of rice and corn meal that was distributed under the program.

TABLE C.1

Total Program Costs, FY 80* ('000 U.S.\$)

	<u>MCH</u>	<u>SF</u>	<u>FFW</u>	<u>TOTAL</u>
1. Commodities	2,652	5,378	644	8,674
2. International Transport**	<u>1,695</u>	<u>3,780</u>	<u>876</u>	<u>6,351</u>
sub total	4,347	9,158	1,520	15,025
3. Internal Costs***	<u>949</u>	<u>1,675</u>	<u>161</u>	<u>2,785</u>
Total	5,296	10,833	1,681	17,810
Number of beneficiaries	104,000	218,000	30,000	

TABLE C.2

Costs per Beneficiaries (U.S.\$)

	<u>MCH</u>	<u>SF</u>	<u>FFW</u>
1. Commodities*	25.50	24.67	22.00
2. International Transport **	<u>16.30</u>	<u>17.34</u>	<u>28.67</u>
Sub total	41.80	42.01	50.67
3. Internal Costs***	<u>9.12</u>	<u>7.68</u>	<u>5.37</u>
Total	50.92	49.69	56.04

* See Appendix C Introduction

** International Transport includes ocean freight from Eastern US port to Abidjan and inland transport by rail from Abidjan to either Bobo-Dioulasso or Ouagadougou (average value of \$278 per m.t. for FY 80).

*** Internal costs include all costs of the MCH and SF programs incurred by CRS, participants, other private and public agencies as detailed in budgets for programs (see table C.4). The internal costs of the FFW program include the costs of the delivery of the food to the site only.

TABLE C.3

Food and Nutrition Program in Upper Volta
 Matching Contributions (Summary)*
 FY 1980 ('000 US \$) (% in parentheses)

Source	<u>Pre-School</u>	<u>School</u>	<u>FFW</u>	<u>TOTAL</u>
Local Private (participants, local religious groups)	355 (37)	654 (39)	54 (33)**	1,062 (38)
GOUV Ministries	424 (45)	649 (39)	88 (55)	1,161 (42)
CRS and US private foundations	97 (10)	58 (3)	19 (12)	175 (14)
US Government	<u>73 (8)</u>	<u>313 (19)</u>	<u>--</u>	<u>386 (14)</u>
TOTAL	949 (100)	1674 (100)	161 (1100)	2,784 (100)

* See Table C.4 for details

** Transport of food to site only -excludes other costs such as materials and technical assistance.

TABLE C.4

FOOD & NUTRITIONAL PROGRAM UPPER VOLTA
MATCHING CONTRIBUTIONS (\$)
FY 1980*

DONOR	DESCRIPTION	PRE- SCHOOL	SCHOOL	FFW	TOTAL
<u>LOCAL PRIVATE</u>					
- mothers of children in pre-school program ¹	food transport to center, salaries of program health workers, special local projects (wells, etc.)	293,970			293,970
- parents of school children ²	food transport to schools, on-site food preparation		654,000		654,000
- participants in FFW projects ³	food transport to work sites			53,800	53,800
- missions, religious groups ⁴	salaries of personnel who handle program activities, warehousing, use of building	60,553			60,553
					1,062,323
<u>LOCAL PUBLIC</u>					
- Ministry of Social Affairs ⁵	salaries of Soc. Aff. personnel use of vehicles and buildings	135,300			135,300
- Ministry of Rural Development ⁶	salaries of Rural Development personnel, use of Ministry vehicles and buildings	10,350			10,350
- Ministry of Health ⁷	salaries of health personnel, use of Ministry vehicles and buildings	15,970			15,970
- Ministry of Finance ⁸	transport, internal warehousing charges	262,430	384,000	87,600	734,030
- Ministry of Education ⁹	salaries of personnel involved in administration of school lunch program, food storage		265,500		265,500
					1,161,150

*Exchange rate utilized: CFA 205 = \$1.00. This table was prepared with the assistance of Susan Wright, CRS, Ougadougou.

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UPPER VOLTA
FOOD FOR PEACE ACTIVITIES
MATCHING CONTRIBUTIONS (\$)
FY 1980(Cont'd.)

DONOR	DESCRIPTION	PRE- SCHOOL	SCHOOL	FFW	TOTAL
<u>U.S. PRIVATE</u>					
- Private Catholic Donations *	salaries of CRS personnel operating budget of CRS/ Upper Volta, contributions to F + N Program ¹⁰	97,250	58,350	19,450	175,050
<u>U.S. Public¹¹</u>					
- Generic Grant for the Sahel AID/afr-G-1467	contributions for Food and Nutrition Project (HU-8D-013) and GSS implementation (HV-8D-013)	35,000	35,000		70,000
- Title II Outreach Grant	coverage of excess transport, warehousing and food-use control costs	37,800	277,826		315,626
Totals		948,623	1,674,676	160,850	2,784,149

* A small percentage of these funds come from U.S. private philanthropic institutions.

NOTES FOR TABLE C.4MATCHING CONTRIBUTIONS FOR FOOD FOR PEACE ACTIVITIES,
CRS/UPPER VOLTA FY 1980

1. Mothers' contribution: 50CFA x 12 mos. x 100, 440 (av. monthly attend. figures)
/ 205 = \$293,970
 2. Transport to schools: 200CFA x 12,600 mt (AER) / 205 = \$123,000
(they pay 2500CFA in order to get outreach benefits but some close to Ouagadougou or Bobo don't get that costly)
 - Wood - av. 120 students-350CFA of wood per day x 20 days x 9 mos. / 205
= \$464,600
 - salary of cook: 1000CFA/mo x 9 mos x 1512 schools / 205 = \$66,400
 3. Food transport: 3500CFA x 3150 mt (AER) = 11,025,000CFA = \$53,800
(av. distance to site = 100 km = 3500CFA/mt)
 4. 23 missions run preschool programs-av. 1 sister's wage 40,000CFA/mo. x 12 mos.
x 23 missions / 205 = \$53,853
 5. - av. gov't personnel per center: 2 aides sociales, 3 adjoinetes, 1 assistante
total salaries = 216,000 CFA/mo.
50% time on child health program: 108,000 CFA/mo. x 12 mo x 19 centers
/ 205 = \$120,000
 - vehicle use: 1 veh. per 4 centers - 800 km/mo x 7.5 CFA/km / 205 = \$4200
 - building use: 10,000CFA/center/mo (urban rents) x 12 mo x 19 centers / 205
= \$11,000
 6. Av. animatrice salary 20,000CFA x 50% of time x 4 anim. per ORD x 12 months
/ 205 = \$9400
 - building use: ORD warehouses 4000CFA.mo k 4 ORDs / 205 = \$950
 - total: \$9400 + \$950 = \$10,350
 7. Av. nurse salary 55,000CFA x 10% of time x 26 centers x 12 mo. / 205 = \$8370
 - building use: 5000CFA/mo x 12 mo x 26 centers / 205 = \$7600
 - total: \$8370 + \$7600 = \$15,970
 8. Admin. building given to CRS - warehouses 700,000CFA/mo
Bobo and Ouagadougou offices 450,000CFA/mo x 12 mo / 205 = \$67,300
schools 50% preschools 35% FFW 15%
customs and transport - av. 5,700CFA/mt
 - schools - 71,820,000CFA = \$350,350
 - preschools - 49,248,000CFA = \$240,230
 - FFW - 17,955,000CFA = \$ 87,585
- Note: The data provided by CRS/UV mentioned waiver of customs duties which USAID does not consider as a contribution
9. Av. teacher's salary 40,000CFA/mo x 10% of 1 person's time/school x 9 months
x 1512 schools / 205 = \$265,500 salaries
(covers the admin, salaries of people involved in program)
 - warehousing: 1000CFA/mo/school = \$88,507

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10. U.S. Private - OPE = 21,420,000CFA

50% schools	-	\$97,250
30% preschools	-	\$58,350
10% FFW	-	\$19,450
10% other projects	-	\$19,450

11. U.S. Public - generic grant - HU-80-002 total deposited FY 1980 \$35,000
HU-80-013 " " " " " "

- Outreach: total expenses 1980 = \$315,626
of which 12% MCH - \$ 37,800
88% SF - \$277,826

APPENDIX D: SEASONAL AND REGIONAL VARIATION IN MALNUTRITION IN UPPER VOLTA

Appendix DSeasonal and Regional Variation in Malnutrition in Upper Volta

Some generalizations can be made about patterns of malnutrition in Upper Volta in terms of seasonality, regional differences, or urban-rural differences but there are so many exceptions to these generalizations that the evaluation team found them to be of limited value in terms of future targeting of any of the FFP program. Table D.1, based on master chart data summarized by CRS, shows some broad seasonal and regional patterns.

TABLE D.1

Percentage of children at pre-school feeding centers less than 80% of median weight for age, by region and season

Region	Nov 1979	Feb 1980	May 1980	Aug 1980
Ouagadougou City	47%	42%	53%	48%
Ouagadougou rural ^a	49%	47%	52%	47%
Ouagadougou rural ^b	47%	42%	49%	48%
West region	59%	49%	56%	54%
South region ^c	46%	50%	49%	45%
Sahel region ^d	55%	59%	54%	60%
North central region	45%	42%	47%	44%
East region	46%	47%	51%	42%
Hauts Bassins	-	31%	33%	26%
Southwest region	-	37%	39%	38%
Volta Noire	-	37%	42%	35%
Comoé	-	30%	29%	28%

a less than 20 km from Ouagadougou. b more than 20 km from Ouagadougou

c represented only by the center at Leo. d represented only by the center Dori.

In general the prevalence of malnutrition was highest in the Sahel and in the West region around the city of Kaya, and was lowest in the four departments in the more fertile southwestern area around Bobo-Dioulasso. However, there was so much variation among the centers within most of the regions that these average figures are not a good guide to regional differences.

As far as seasonal patterns are concerned, we can see a general pattern of rates of malnutrition being lowest in February and highest in May, which is certainly reasonable given that the harvest comes in October and November; and the weather is relatively cool and food is relatively plentiful in December, January and February. By May and June, food stocks have often begun to run low and the weather is very hot without the respite offered by the rains, which arrive usually in July. However, there is considerable variation in this seasonal pattern from center to center and from one year to the next. For a random sample of the pre-school centers, we plotted the percentage of malnourished children month by month for the last complete agricultural year (October, 1979, through October, 1980) along with the number of children who attended each of these months. Figures D.1-D.5 replicate five of these center graphs to illustrate the wide differences in seasonal patterns that we found. Part of the explanation for the considerable month to month change in percentage of malnourished children at any individual center may be attributable to the highly variable number of children attending (see numbers in parentheses on the graphs) each month. Further variation is introduced by having different numbers of new inscription from month to month, and from center to center.

Although it was impossible to find a consistent pattern of seasonal variation in malnutrition in the centers at which we evaluated nutrition impact (see section 3.2), we were still concerned that some seasonal differences in the rates of malnutrition in our group of new inscriptions might bias the comparison with the

program participants, all of whom were measured in December or January. However, the difference in percentage malnourished between our December-January group new inscriptions and those from any of the other seasons were not statistically significant (see Table D.2).

TABLE D. 2

Seasonal variation in percentage of malnourished children among new inscriptions into the CRS pre-school feeding program

Season	<80% median wt/age	Total number
Dec.-Jan.	47%	43
February	33%	52
March	44%	100
April-May	31%	39
June-July	57%	23
Aug.-Oct.	50%	36
November	60%	97

Table D.3 shows the distribution of malnutrition by an urban, semi-urban and rural breakdown. As with the regional and seasonal patterns, the differences are neither sufficiently significant nor sufficiently consistent to provide a guideline to targeting the pre-school feeding.

TABLE D. 3

Percentage of Children under 80% of median weight for age
by season and urban, semi-urban, rural breakdown

	URBAN		SEMI-URBAN		RURAL	
	%	T	%	T	%	T
Aug. 79 ^{x1}	46.4	7,157	40.9	643	43.8	20,548
Nov. 79 ^{x1}	47.4	10,536	52.6	1,420	46.4	23,997
Feb. 80 ^{x1}	42.8	13,461	45.7	719	43.7	33,826
May 80 ^{x1}	52.8	11,924	55.1	5,560	48.4	40,233
Aug. 80 ^{x1}	47.8	12,959	57.2	1,914	45.8	37,008
Feb. 80 ²	40.7	15,379	37.5	4,525	41.5	44,642
May 80 ²	48.5	15,099	50.2	8,445	46.8	50,351
Aug. 80 ²	42.1	17,092	42.7	5,056	42.9	48,667

^{x1} Not including CRS Administrative Region of Bobo-Dioulasso

² CRS Administrative Region of Bobo-Dioulasso included

Figure D.1 Percentage of children \leq 80% of median weight for age at the Khyon preschool center.

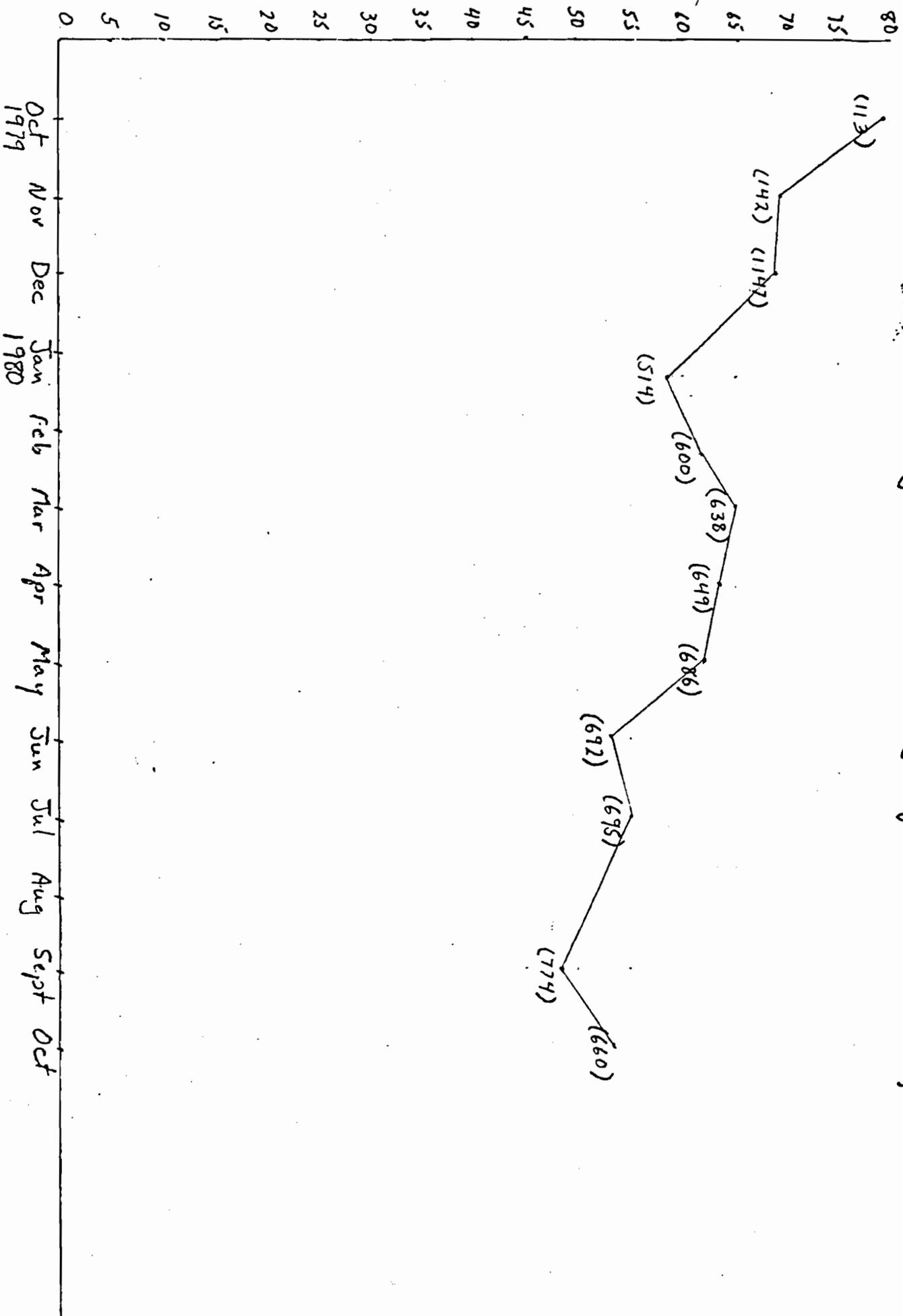


Figure D.2 Percentage of children < 80% of median weight for age at the Kamtchari preschool center.

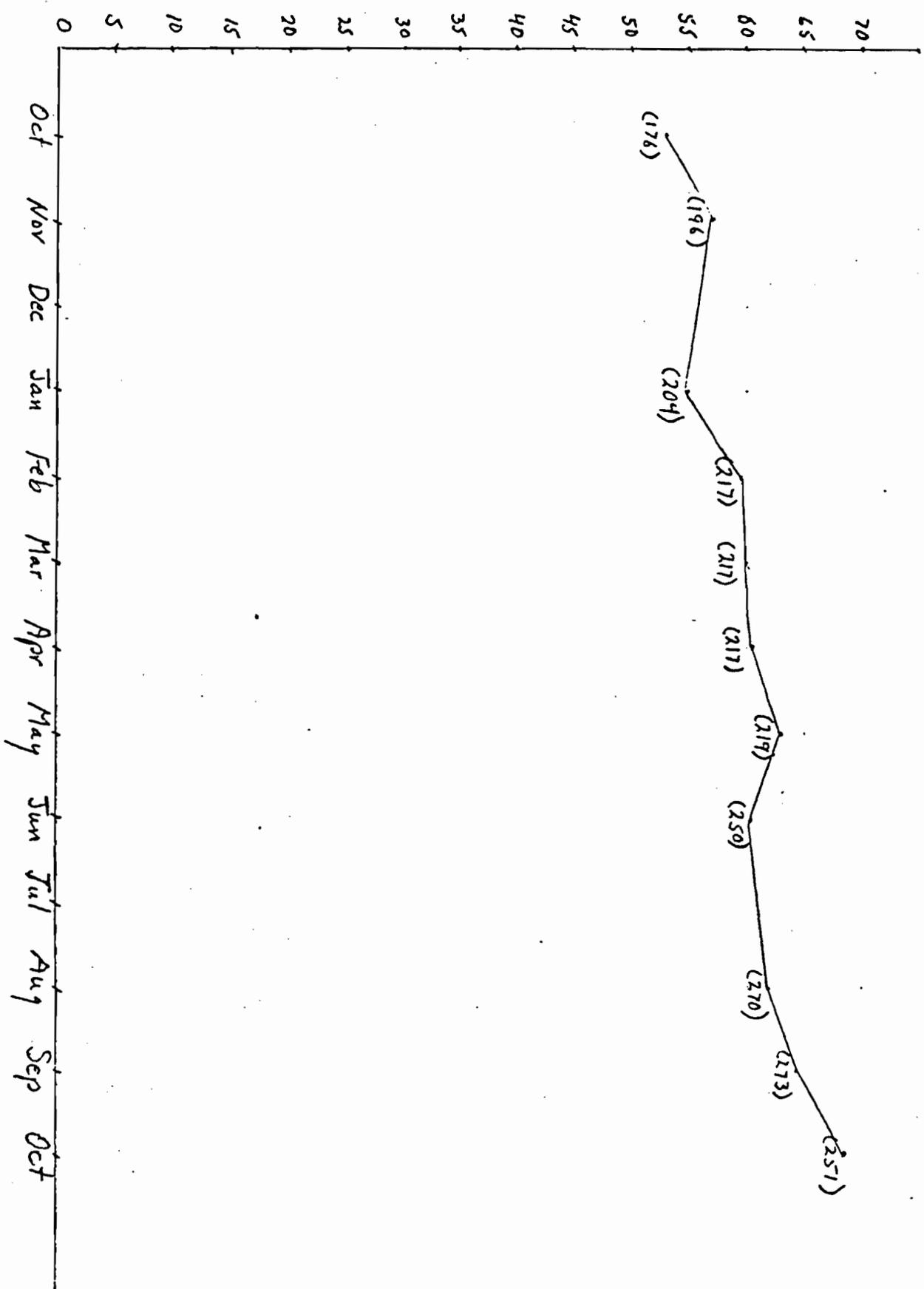


Figure D.3: Percentage of children < 80% of median weight for age at the Namourngou preschool center

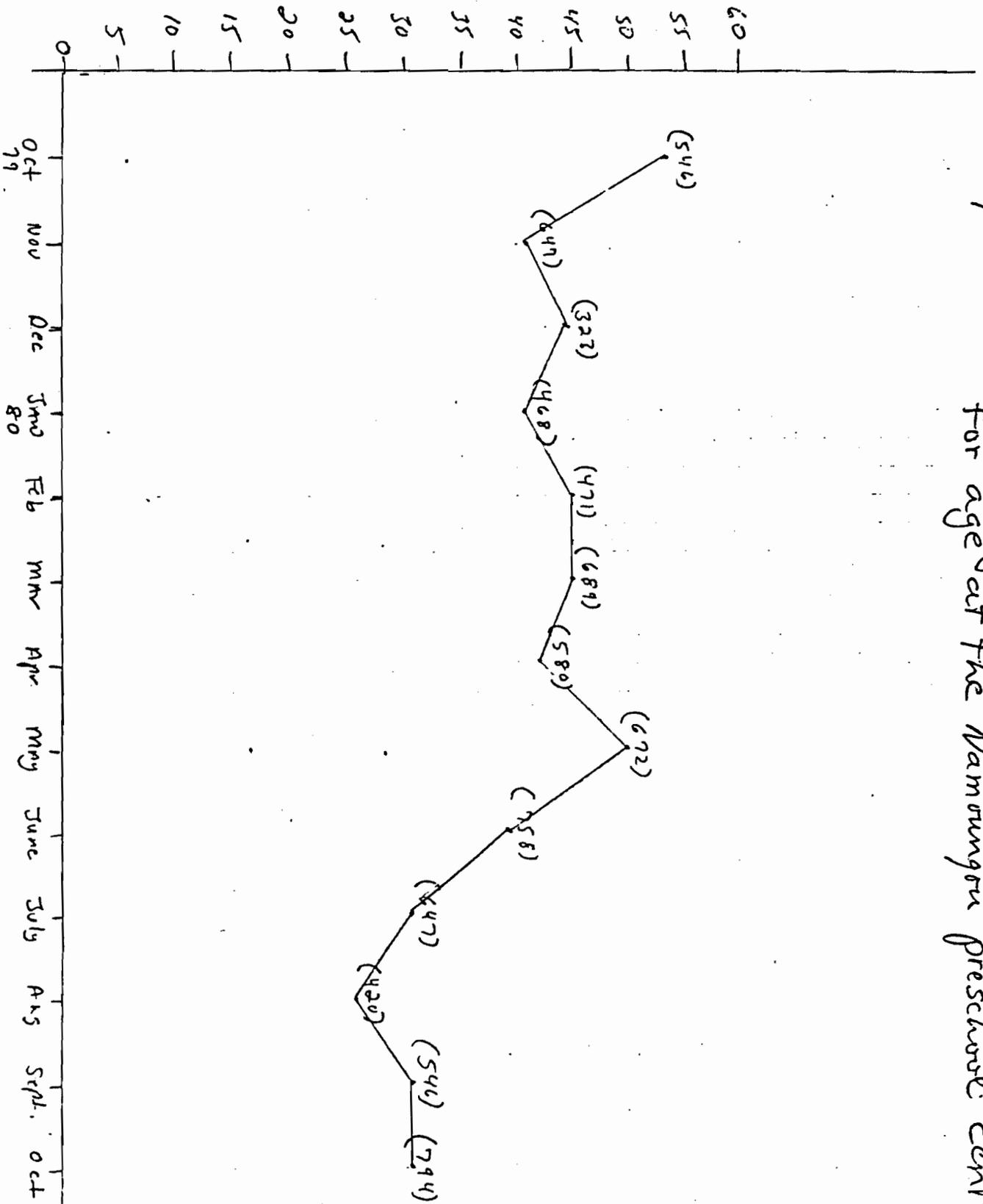


Figure D, 4: Percentage of children < 80% of mechanism, Ucin, for age at the Manega preschool center,

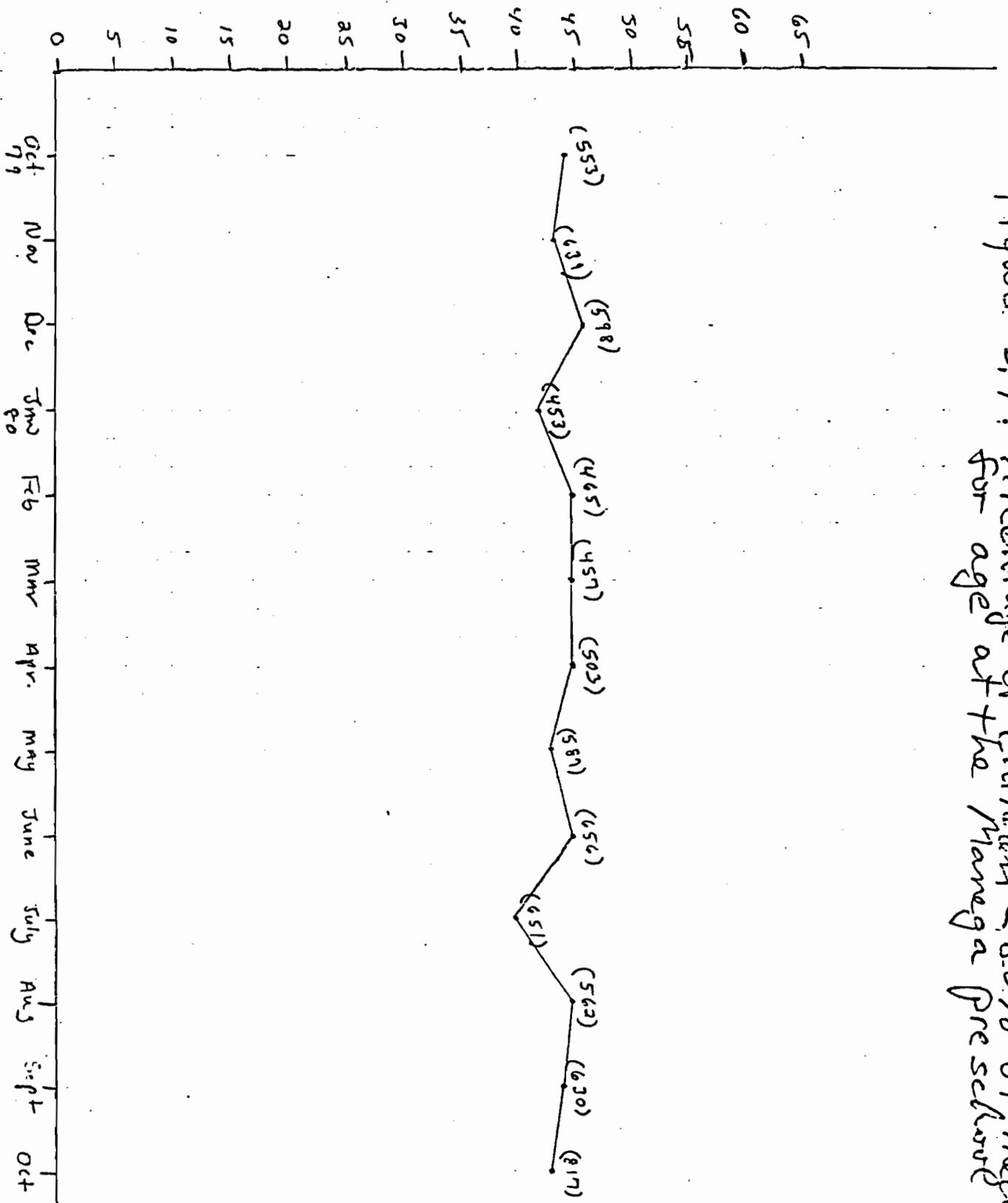
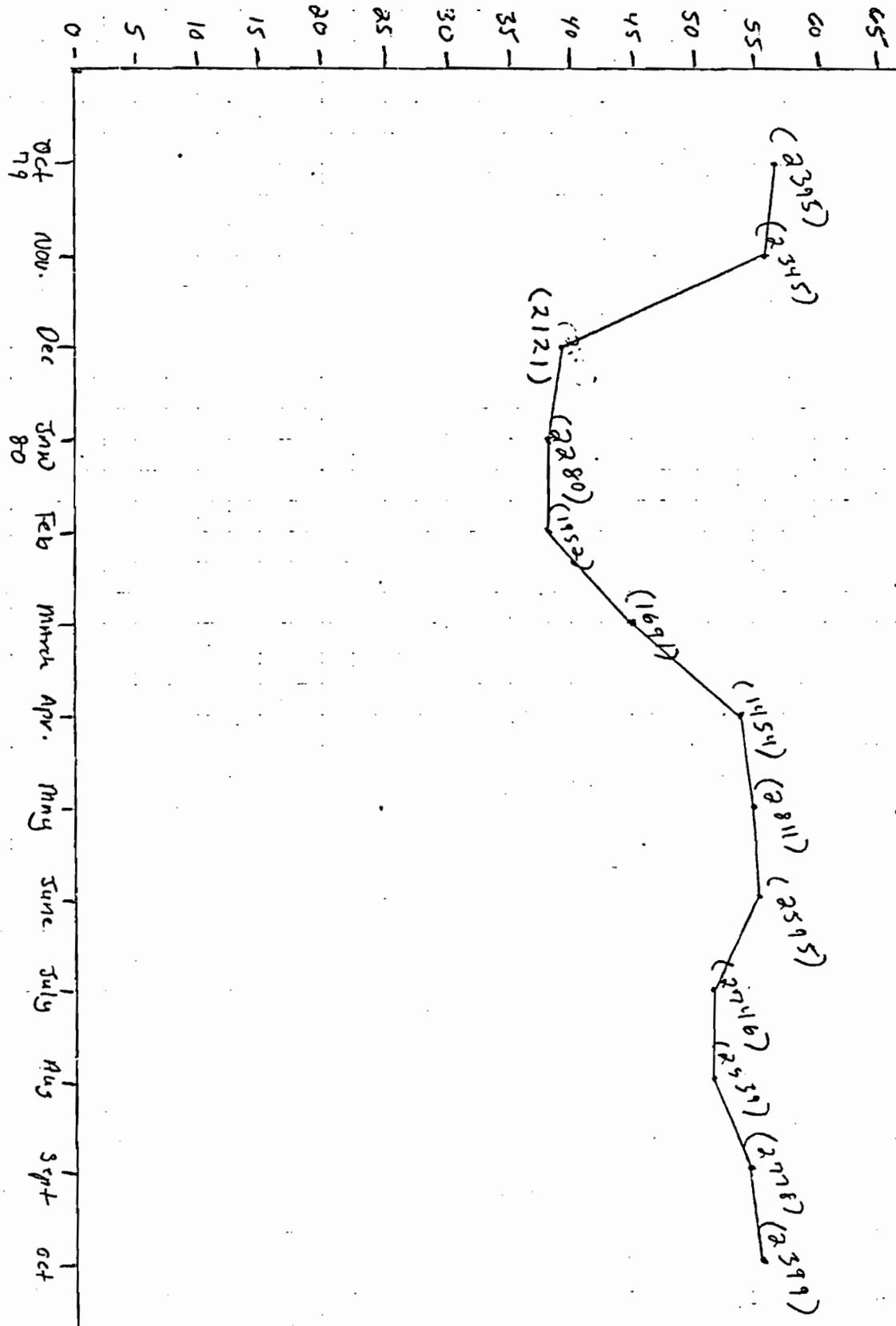


Figure D.5: Percentage of children < 8090 of median weight for age at the Dapelegho preschool center,



APPENDIX E: GOUV REPORTS ON THE FFP/UV EVALUATION

CABINET

B.P. 515 — TEL 327-25 - 44-24

N° 00030 /MAS-CF/CAB/DAS

ACTION COPY

Ouagadougou, le - 3 FEV. 1981

Réf. :

*Le Ministre des Affaires Sociales
et de la Condition Feminine*

Objet : Envoi de rapport

USAID/OUAGADOUGOU
ACTION: <i>OHK/FFP w/ST</i>
INFO: <i>OPR</i>
DATE ACTION REQUIRED:
NAN: <i>SIR</i>
DISTRIBUTION: <i>B/OIK</i>
REMARKS:

A
Mademoiselle Christine BROWN
Responsable pour l'Aide Alimentaire
U. S. A. I. D.

Mademoiselle,
Comme suite à la lettre N° 0112 qui nous a été transmise par Monsieur LARRY GRAHL, Chargé d'Affaires de l'Ambassade des U.S.A. en Haute-Volta, je vous fais parvenir le rapport élaboré par mes services à l'issue des travaux d'évaluation du programme de nutrition et d'alimentation mis en place par le CATHWEL dans notre pays et auxquels ont participé Madame ZIGANI Madeleine et Monsieur SININI Adamou.

Veillez agréer, Mademoiselle, l'expression de mes meilleures salutations.

AMPLIATION / :

1 - D.A.S.

Mme KONE Marie Madeleine
LE MINISTRE

Or, beaucoup de villages visités ont compris que le problème d'eau est fondamental (les puits, busés ou forés selon la nature du sol, et les barrages permettent un approvisionnement en eau pour les besoins domestiques, favorisent l'application des mesures d'hygiène, l'augmentation des cultures vivrières, l'élevage, etc ...). Les villages reçoivent avec plaisir les vivres du programme (centres pré-scolaires, projets d'investissement humain), mais l'aide prioritaire qu'ils demandent est celle-ci : "Aidez-nous à résoudre le problème de l'eau dans notre village" ; "nous creusons les puits de nos mains chaque fois que le terrain le permet mais ces puits ne durent souvent pas plus de neuf mois parce que nous n'avons pas les moyens d'acheter le ciment et le matériel pour les buser".

A l'issue de cette évaluation, le Ministère des Affaires Sociales et de la Condition Féminine propose :

- 1°/ - que les villages touchés par le programme voient diminuer progressivement la distribution systématique de vivres au profit de matériel destiné à améliorer les infrastructures villageoises et notamment l'hydraulique et que des équipes techniques soient formées pour les mettre en place ;
- 2°/ - que la branche formation des animatrices villageoises soit amplifiée (cf. l'expérience de Gaoua qu'il faudrait pouvoir créer dans chaque Département) ;
- 3°/ - que le personnel du Service Social reçoive un stock de vivres pour les distribuer, après enquête sociale et étude du milieu, aux personnes nécessiteuses ou aux zones sinistrées (cas de mauvaises répartition des pluies, pères de familles sans emploi, mineurs rejetés, orphelins, etc ...)

Nous ne saurions terminer ce rapport sans apporter l'élément complémentaire suivant : nous avons pu participer aux travaux de l'équipe d'évaluation qui se sont déroulés dans notre pays depuis le 5 Janvier 1981 parce que ^{la} langue utilisée était le français. Toutefois nous n'avons pas pu exploiter le document intitulé " Preschool program" qui nous a été remis le 6 Janvier 1981 parce qu'il n' a pas encore été traduit. Aussi, nous insistons pour que tous les documents finals élaborés à la suite de cette évaluation nous parviennent, dès que possible, traduits dans la langue officielle du pays : le français.

2.3 Method for Determining Size and Composition of the Program

Identification of CATHWEL, USAID, GOV criteria for determining the size and composition of the program.

2.4 Selection of Target Groups

Description of the CATHWEL criteria (geographic, age/sex, socio-economic) for selection of target groups and centers, and an assessment of the consistency of the selection with actual nutritional and related problems.

3. ORGANIZATION AND SOUNDNESS OF THE FFP/CATHWEL PROGRAM

A descriptive and analytical review of program operations.

3.1 MCH and SF Programs (each program to be analyzed separately)

3.1.1 Objectives

Identification of the specific objectives and/or expectations of each of the programs, as defined by CATHWEL and an analysis of the extent to which they are appropriate, and are being met, and are affected by AID policies, regulations and enabling legislation.

3.1.2 Target Groups

A description of the target groups actually being served by the programs and an assessment of the relative importance of each one to the achievement of program goals.

3.1.3 Organization

A description and analytical review of how the program functions, including:

- a) distribution centers -- the total number, the location and the organization responsible for each one;
- b) modus operandi in the centers -- how FFP services are delivered, whether the rations are taken home or consumed at the center, other services offered, contracts with, and responsibilities of recipients (or their parents);
- c) health and nutrition education (promotional activities) -- group sessions, individual contacts, food preparation demonstrations;
- d) records -- the Growth Surveillance System, reports on services provided and rations distributed, stock control records;
- e) coverage -- criteria for accepting recipients into the program, estimates of the catchment area (i.e. the distance travelled to reach centers);

- f) rations -- the quantity and composition of the rations, their nutritional value, acceptability, and economic value;
- g) service providers -- the number of providers, their characteristics, their responsibilities, pre-service and in-service training;
- h) logistics -- the storage, distribution, accountability, and quality assurance of FFP commodities, functional and financial responsibility for the logistics;
- i) management -- supervision of the logistical support system and of the delivery of services to beneficiaries.

3.1.4 Service Statistics

Review of available CATHWEL data on the number and age of beneficiaries and their nutritional status.

3.1.5 Budget

Total program costs provided by USAID, CATHWEL, GOUV, non-governmental organizations (such as church and community groups), beneficiaries, other (such as sales of the containers).

3.1.6 Major Strengthes and Weakness

Identification of major successes and problems for the purposes of:

- 1) making recommendations that will improve the MCH and SF programs (by emphasizing successful elements and modifying or eliminating weak ones),
- 2) providing lessons to FFP programs in other countries,
- 3) developing criteria to be used by decision makers in determining the nature and size of the MCH and SF programs, and
- 4) to the extent possible, make recommendations with regard to the size and composition of the programs based on these criteria.

3.2 FFW Programs

3.2.1 Objectives

Identification of the objectives and/or expectations of the FFW programs and an analysis of the extent to which they are being met.

3.2.2 Selection of Projects

A description and analysis of how, and by whom, projects are initiated, and the criteria for selecting the projects that are supported.

3.2.3 Description of FFW Projects

A description of the number, types, and auspices of projects supported under FFW, and the extent to which the objectives of individual projects are achieved.

3.3.4 Organization

A descriptive and analytical review of how the program functions, including:

- a) management -- the responsibility for managing and monitoring FFW projects, and for controlling and distributing FFP commodities;
- b) rations -- the quantity and composition of the rations, their economic value and proportion of total payments to individual participants, their value as a proportion of total resources provided to FFW projects by participants (i.e. self-help) and/or other donors;
- c) logistics -- the storage, distribution, accountability, and quality assurance of FFP commodities, functional and financial responsibility for the logistics;
- d) records -- project achievement reports, commodity distribution and stock control records.

3.2.5 Service Statistics

A description of the number of recipients, the length of time and seasons in which workers participated in FFW programs.

3.2.6 Budget

Programs costs provided by: USAID, CATHWEL, and to the extent possible, GOUV, participants, other.

3.2.7 Major Strengths and Weakness

Identification of major successes and problems to assist in developing criteria to be used by decision makers in determining future directions of the FFW program.

4. MEASURES OF EFFECTIVENESS

Given the paucity of relevant data and the short time available, the team will be unable to produce conclusive evidence of the impact of the FFP/CATHWEL program. The team will try to obtain suggestive data, develop hypotheses, identify the priority indicators of effectiveness, and recommend guidelines for further measuring effects. The indicators of impact that will be considered are:

- a) nutritional status
- b) knowledge about nutrition
- c) food consumption and expenditures (to determine whether the food ration is a supplement or a substitute)
- d) school attendance
- e) preventitive health behavior (clinic attendance, immunizations, nivoquine acceptance)
- f) the effect of the program on subsistence agricultural production

5. CONCLUSIONS

5.1 Criteria for Determining the Size and Scope of the Program

The team will identify criteria that will assist USAID and CATHWEL decision makers with determining how to most effectively allocate limited FFP/Title II budgetary and food resources in UV. In particular, the team will develop criteria for determining: the magnitude of the national program, the priorities for including specific target groups and centers (including both PMIs and schools), and for allocating resources among the program categories (MCH, SF, FFW).

5.2 Recommendations

Pertaining to all of the above.

B. The Evaluation Approach

1. Prior to the team's arrival in UV

- 1.1 All available documents will be studied by as many team members as possible, including:

FFP and other relevant USAID materials; CRS reports, studies, articles and working papers; World Bank reports; relevant materials produced by American researchers (CRED, MSU, Purdue etc.); studies, reports and official documents from the GOUV; WHO reports; and others.

- 1.2 A scope of work will be prepared for each member of the team defining his/her responsibilities and the deliverables he/she will be expected to produce.

- 1.3 The team will prepare preliminary drafts of the data collection instruments to be used in UV. If possible, they will be completed far enough in advance of the UV visit so they can be reviewed in UV by the appropriate persons, and recommendations incorporated into the final draft prior to arrival. The instruments will include:
- a) a ticklist of information to be obtained from USAID, CATHWEL, and GOUV relating to FFP program policies and practices;
 - b) a ticklist for site visits of MCH's, SF programs and FFW projects (to ensure uniform data for describing and assessing distribution centers);
 - c) guidelines for talking with recipients (concerning -- knowledge of nutrition, the reasons for self-selection, food consumption practices, preparation of FFP food, acceptability of FFP food, and whether the ration is a substitute or supplement);
 - d) to the extent possible, a study design for assessing nutrition impact.
- 1.4 USAID, in cooperation with CATHWEL, will confirm all logistic arrangements (as per Logistic Support outlined elsewhere).

2. During the team's four week stay in UV

- 2.1 The evaluation team will have unrestricted access to all data relating to the PL 480 Title II Program.
- 2.2 The team will include the following persons:
- a) representing the contractor (ISTI)
the team leader*
a nutritionist*
an agricultural economist*
 - b) representing AID/Washington
an evaluation officer*
 - c) representing the VOLAGS
a representative*
 - d) representing USAID/REDSO/Abidjan
the nutritionist*
the FFP officer
 - e) representing USAID/UV
the food monitor
a member of staff

* Team members with specific responsibilities for contributing to the team's report

- f) representing CATHWEL/UV to be determined
- g) representing GOUV representatives from the ministries of health, education, rural development and social affairs, if possible

2.3 It is tentatively planned that the team will spend most of the first week in Ouagadougou meeting with relevant persons and reviewing materials that were not available to them in advance. Most of weeks 2 and 3 will be spent in the field visiting distribution centers. The final week will be used for collating findings, preparing as much of the draft report as possible, and meeting with USAID, CATHWEL and GOUV to review the findings and discuss tentative conclusions.

2.4 The site visits will be made by 3 teams of upwards of 3 persons each (depending on the availability of transport and accommodation). Each team will spend altogether approximately 10 working days in the field (although the composition of each team may change over that period). The teams will reside in central locations and visit different centers each day. They will return to Ouagadougou at least once and transfer to a new area. (The choice of centers will be made by USAID/UV, in cooperation with CATHWEL). The findings from early site visits will be collated as quickly as possible so the approach can be modified if appropriate.

3. After the team's departure from UV

3.1 The team will prepare a complete preliminary draft report and deliver it to FFP/W within four weeks after departure.

3.2 FFP/W will circulate the draft to all of the appropriate persons, and will allow CRS a minimum of 30 days for the review.

3.3 The draft will be modified by ISTI and they will prepare a final report. AID and CRS will each have the option to append to the published report a commentary on the report.

3.4 (a) FFP/W will provide seven (7) copies of the draft report in English and one (1) in French for use by USAID/UV in addition to the copies produced for AID/W use, four (4) copies of the draft report in French for participating GOUV Ministries, two (2) copies each in English and French for CRS/NY and one (1) copy each in English and French for CRS/UV.

(b) The same report production requirement will apply to the final report.

C. Logistic Support

The following logistic support will be provided to the team by USAID/UV (in cooperation with CATHWEL/UV), and funded according to the terms of the contract.

1. An itinerary will be developed that will enable 3 teams (of approximately 3-4 persons each) to spend 10 working days in the field. Each team will visit 10-15 distribution centers or more (including PMIs, SF centers, and FFW projects).
 - a) transport will be provided. (If USAID and CATHWEL do not have an adequate number of vehicles available, additional vehicles will be hired locally);
 - b) accommodations will be arranged or camping equipment provided;
 - c) adequate water containers will be provided.
2. Office space will be provided
3. Secretarial assistance will be provided or contracted for
4. Interviewers/translaters will be recruited to accompany teams into the field, as necessary. The team will contract and pay interviewers.
5. All necessary authorizations will be obtained from the GOUV and relevant non-governmental organizations.
6. USAID/UV will confirm all arrangements to FFP/W, at least two weeks in advance of the team's arrival, and advise concurrence.