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DRAFT REPORT

**REVIEW OF THE CRS/RWANDA MULTI-RATION PILOT ACTIVITIES**

by

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**February 19, 1986**

## REVIEW OF THE CRS/RWANDA MULTI-RATION PILOT ACTIVITIES

### 1. PURPOSE

The purpose of the consultancy is twofold:

1. To review the feasibility of the CRS Rwanda multi-ration pilot program achieving its stated objectives, taking into consideration the ration package, economic activities and environmental constraints.
2. To assist in the design of a study to assess the impact and advantages of a larger ration package compared to a smaller ration package in the CRS Rwanda program.

### 2. INTRODUCTION

The CRS Food and Nutrition Program (FNP) in Rwanda is designed to improve the nutritional status of children under five. The FNP includes a full range of services: (a) a growth surveillance system, (b) provision for treatment of severe cases of malnutrition and referral to health services, (c) a full program of nutrition education, and (d) demonstrations of gardening, small livestock raising and cooking. A food ration of 2 kilos of cornmeal, 2 kilos of powdered milk, and one kilo of oil is also provided. The ration is intended both to assure the young children in the family receive additional quality foods, and that the family as a whole receives an economic transfer which will raise its income to a level which will result in an improvement in the condition of the child. CRS's review of experience with FNP in a number of African countries indicated that food was shared within families and that providing food for the child alone was not sufficient to achieve these objectives.

Over the past few years, CRS responded to these concerns by registering additional family members to receive a ration, (ie mothers and/or additional children below the age of five), in its FNP in most African countries. However, in Rwanda, questions were raised concerning the introduction of a multi-ration by various of the interest groups involved with the program. Firstly, it was feared the food ration would become so important it would overshadow the educational content of the FNP. Secondly, there was concern with creating dependence on the food ration. In the end, a decision was taken to try the multi-ration in Rwanda on an experimental basis. The multi-ration was introduced into three of the CRS nutrition centers (called Centre Nutritionnel - C.N.) in 1984. This review is intended to determine whether the experimental program is reaching its stated objectives.

However, determining whether the experimental program is reaching its stated objectives is complicated by other changes which are being made in the CRS program. The requirement to make these changes results from a directive from the President of Rwanda

that all development activities in Rwanda are to be managed through the local administrations of the areas concerned. Rwanda is a country with a well-organized administrative structure. There are ten prefectures divided into communes which are further sub-divided into secteurs and cellules. The prefect who administrates a prefecture and the bourgmestre in charge of a commune are appointed by the President, while the chefs de secteur and the chefs du cellule are the elected representatives of the people in their areas. The level of administration which is to be responsible for development activities is the commune.

In the past, CRS dealt with the Ministry of Health and Social Affairs which had an overview responsibility for the program, and directly with the C.N.s. Organizing activities through the commune administrations will require considerable management changes, and the content of programs will depend on the priorities of the individual commune. In March 1985, CRS initiated a dialogue with the Rwandan Government to resolve the issues arising as a result of the directive to work through the communes.

The discussion points involved in the dialogue and the Ministries which have been identified as primarily responsible for resolving each point are included in Annex A. To date CRS has held 15 meetings with government representatives. Certain points have been resolved but many others are still under consideration. Among the decisions taken is that, in future, the administrative responsibilities of communes will include taking charge of the distribution of the rations and the management of the funds resulting from the cotisation (contribution) made by the parents in return for the services they receive at the centers. The C.N. will retain only limited supplies of foods to use in treating the severely malnourished. These decisions will result in some disruption to programs, and will place particular burdens on parents who may live some distance from either or both of the C.N. and the commune headquarters in collecting the rations.

The decision to remove the food distribution from the C.N. is also related to the desire of the Ministry of Health & Social Affairs to create a uniform nutrition program in the country. The C.N. supported by CRS are integrated into the national program of the Service du Nutrition and comprise 98 of the 170 centers in the country. The only major differences between the programs at the CRS C.N. and the government C.N. are (1) CRS retains children in the program until the age of five while they are graduated at the age of three from other centers and (2) the food rations are provided only centers receiving support from CRS.

The government representatives disagree with the present mode of operations of CRS centers which register children into the program to receive the ration on a first come first served basis. It is the general attitude of the government representatives that poverty and malnourishment should be the criteria for receiving

the rations. In addition, they believe that the criteria for receiving the rations should be established and agreed by the people of the area themselves. They also emphasize that the focus of the C.N. should be on the services and education provided, as well as the projects to assist households to become more self-sufficient in food, and not on the food rations.

Decisions concerning the possible uses of food aid, and the types of activities which CRS should undertake will be taken within the context of Rwanda's present and future food and agriculture situation. The accomplishments of both the existing C.N. program and the experimental multi-ration activities should be documented to assist in the decision-making process.

Section 3.0 of the paper discusses the environment within which the CRS Food and Nutrition Program (FNP) operates, including the existing and evolving food situation, and government plans for dealing with the food problems in the country. Section 4.0 describes first the history, activities and accomplishments of the C.N.s. The multi-ration program is then described, its objectives are discussed, and certain questions are posed which will need to be answered in the process of determining whether the multi-ration activity is achieving its objectives. Section 5.0 presents an analysis of CRS activities relating to the use of the multi-ration in the FNP including the dialogue with the government. Section 6.0 contains recommendations both for a study of the multi-ration activity and for the CRS program. Section 7.0 contains the conclusions of the consultancy.

### 3.0 THE ENVIRONMENT OF FOOD AND NUTRITION IN RWANDA

#### 3.1 Agricultural Production and Food Consumption

Rwanda is a predominantly rural country; only 5% of the population lives in urban areas. Agriculture employs 91% of the workforce. Given the small size of the country (26,338 square km) and the relatively large population (estimated at 6.1 million in 1985), farm size is severely limited, averaging just under one hectare per household.

Food production increased by approximately 50% in the 10 years up to 1984, and as a result, food availabilities per capita increased at a rate somewhat above the population growth rate of 3.7% per annum. The growth in production is positive particularly when compared to the record of other African countries. However, it was achieved mainly by bringing 40% more land into production. With the exception of sweet potatoes, the yields of most crops remained stable or declined; increased production was mainly bananas, roots and tubers.

The root crops are consumed together with significant quantities of pulses. As a result, the average diet in Rwanda is essentially adequate in calories and protein, although there is a very low fat intake. The diet is restricted to a very few foods. For example, a study of eating habits carried out in 1982 (1) found only 17 foods which were consumed at least five times per year, and only three that were consumed more than once a week, namely sweet potatoes, beans and banana beer. Besides beans, nutritional value in the diet is provided primarily by green leaves (taken from bean, cassava, potato and wild plants). Rwandan households also engage in livestock production, though the national herd of cattle has been declining. The quantities of milk and meat products consumed is not known with any accuracy.

Data concerning agricultural production has improved considerably in quantity and quality as a result of the National Agricultural Survey. The pilot survey was carried out in 1982-83 and the national survey in 1984. The results of the survey are just becoming available. Information on food consumption and the proportions of food crops bought and sold will also be increased substantially when analysis of the data from the National Household Budget and Consumption (NHBC) Survey is complete. The pilot survey was carried out in the same period as the pilot survey for the National Agricultural Survey, and the NHBC survey itself later in 1984. It is expected that the results will be available before the end of 1986.

Although figures on gross food availabilities indicate sufficient food is available, it is known that problems of malnutrition affect certain areas and households within the country. For example, although Ruhengari Prefecture produces large quantities of food and agricultural products, these surpluses are generated in areas of the region which benefit from volcanic soils. In the

non-volcanic areas, production is much lower, and the prefecture as a whole has rates of child malnutrition equivalent to those found in the rest of the country. CRS figures shows that 31% of the children in the FNP in Ruhengari are below 80% of the Harvard Standard, and at certain C.N., the rate is as high as 43%. A study by H. L. Vis et. al. (2) indicates that malnutrition problems are particularly severe in families with large numbers of young children.

Various studies indicate that up to 25% of households produce significantly less than they require for consumption. Part of the balance is made up by food purchases with cash available from coffee and tea production, or off-farm work. In all, nearly 50% by weight of food produced passes through a market. Only a proportion of this is destined for the small urban market; studies in rural areas indicate that 44% of the expenditures of farm households are for food stuffs (excluding beverages). Accordingly, the typical Rwandan farm household is not an autonomous unit but is participating in the market and taking a portion of its foodstuffs from the market. In this situation, CRS food rations may be either a supplement to the diet, or may make it possible for the family to sell a higher proportion of their crops and hence would substitute for normal consumption. Whether the economic transfer results in a better diet depends on what is purchased with the cash.

### 3.2 The Contribution of Food Aid

In general, there is concern over food aid in Rwanda especially with respect to dependency issues. Various documents (e.g. Rwanda Agricultural Policy Review prepared by W.H.M. Morris and Gregory C. Lassister, March 1985 for USAID/Rwanda) also take the view that food aid is not generally needed. When it is required urgently, as in July 1984 following a crop shortage due to drought, it does not arrive in time. Much of the assistance requested by the Government of Rwanda arrived in March 1985 after a favorable intervening harvest which had eliminated the need for the assistance. The subsequent sale of certain of the beans provided, and the current free distribution of substantial quantities of sorghum, appear to have resulted in depressed market prices and hardship to farmers.

The Rwandan government believes that food aid is incompatible with its goal of food self-sufficiency. The Third Development Plan covering the period 1982-1986 indicated that food aid would be needed in a transition period and to provide security stocks in time of drought. However, the objective was to phase out food aid gradually over the plan period. Instead, food aid has increased, partially due to the drought, and partially to assist in caring for refugees which arrived from Uganda. In any case, food assistance represents only a small portion of the food supply, the cereals imported amounting to perhaps 4 percent of the local production. Other food aid commodities such as oil and milk products are also imported commercially as they are in short supply in the country.

Although the commentary of Morris and Lassiter is understandable in the circumstances, it overlooks the fact that established food aid activities such as the CRS program have food aid stocks which can be made available immediately in the case of emergencies. CRS began distributing food in August 1984 and in all provided 4,692 MT of PL 480 Title II foods for the emergency program. In addition, project food aid, if managed properly, can target quality foods on particularly needy groups without effecting market demand as small amounts of food in terms of gross availabilities can have a significant beneficial impact on this limited number of households. The beneficial or negative effects of CRS activities will depend on how well targeted the rations are to poor, malnourished households.

### 3.3 Elements of the Food Strategy

The Third Development Plan and subsequent planning documents such as the Food Strategy Plan prepared by the government in association with the European Development Fund address the problems of maintaining and improving the food situation in Rwanda. The prospects are not bright in the medium term, and it is recognized that strenuous action will be required.

Past production increases were achieved primarily by bringing additional land into production. It is recognized that the limits of cultivable land essentially have been reached. Land for the approximately 50,000 new households which are created each year can be found mainly by dividing existing holdings (Rwandan inheritance practices are to divide land holdings between all male children). To compound the difficulties, erosion problems are increasing due to the loss of tree cover both as marginal land is brought into cultivation and trees are cut for fuel. Soil fertility is also declining due to erosion and the decrease in fallowing.

The food strategy plan proposes to tackle these problems through a series of interrelated measures:

- control of erosion through the construction of grass bunds.
- promotion of the use of fertilizer (including manure) on food crops.
- development of improved varieties of food crops.
- development of more efficient systems of production.
- a set of priorities for interventions in each of the principal food crops.

There is considerable donor involvement in various aspects of the agriculture and food strategy. USAID is providing assistance in improving the data base available for planning and is implementing a Farming Systems Improvement Project supporting a research effort which includes on-farm research as an integral component, and is also working to improve the connection between research and extension.

One of the major problems in agricultural improvement in Rwanda

is the weakness of the extension service. There are some 1,400 agents to serve the approximately 1,000,000 farm households in the country, and many of the agents have very rudimentary training. There are limited facilities for training agricultural personnel, only 50 or so A2 (levels of personnel in government service start from A3 and progress to A0) are graduated each year. Facilities for upgrading existing personnel can handle only 60 trainees per year.

The basic unit for planning and managing development activities of all types is the Conseil Communal de Developement. These committees include the administrative personnel (bourgmestre, chefs de secteur and chefs de cellule) as well as any technical personnel present in the commune. They have their counterparts at the lower level of the secteur and also at the level of the prefecture. In addition, there are specialized committees for specific purposes. For example, the basic unit of the extension service is the Commission de Vulgarisation de Secteur. In each case, it is intended that the technical personnel will provide a professional input into the planning efforts of the administrators, and the administrative personnel will provide the political support required by the technicians in their efforts to work with the rural population. Given the limited number and quality of agricultural personnel present in the communes, consideration is currently being given to involving the health services in the area more closely in the efforts to increase agricultural production.

#### 3.4 The Role of Health Centers - Centre de Sante (C.S.)

The Third Development Plan places emphasis on providing health services for the masses, mainly by increasing numbers of beds and health personnel in the rural areas. These plans have been revised somewhat due to developments over the plan period. In particular, the emphasis on numbers of hospital beds has been reduced as it is recognized that 30% of existing beds are occupied by persons suffering from diseases which are being tackled through vaccination programs. Instead, current plans are to group health services together in one place, and to associate them with demonstration and extension activities such as vegetable gardens, small livestock raising, portable water, erosion control, etc.

At present, health services are scattered about the country, and a C.N. may be in one location, a dispensary in another, and a maternity unit in a third. The intention is to group all these and other medical services together into C.S. to economize on facilities, personnel and stores of supplies. A better service can be provided also to the local population which will be able to receive all services required at one location.

Although it will be sometime before facilities can be grouped together, functional integration can proceed much more rapidly. Some of this is already complete. An example is the Nutrition Service which was formerly in a separate Ministry of Social

Affairs and Cooperatives. Social Affairs is now merged into the Ministry of Public Health. The proposal to utilize C.S. also as a focus for other extension efforts arises from the recognition that 60% of the women in the country attend health centers of their own volition each year. Hence, the C.S. can serve as a contact point for scarce extension personnel. These plans may well be successful given the long established, multi-faceted program of the C.N. which is discussed in the following section of the report.

#### 4.0 THE CENTRES NUTRITIONNEL AND THE CRS MULTI-RATION ACTIVITY

##### 4.1 Centres Nutritionnels

The C.N. are a long established fixture in Rwanda. According to a Ministry of Health document (3), three C.N. were established in the 1950s, and there were 29 operating by the end of the 1960s. Centers continued to open throughout the entire intervening period, and CRS began participating in the program in 1966. There are now approximately 160 centers operating in the country, 98 of which are supported by CRS. A training school for center personnel was established in Ruhengeri in the 1960s and places are provided at the school for personnel from both CRS and the centers opened by the government. According to the most recent report available (1984), approximately 43% of the moniteurs and monitrices of centers have been trained. CRS centers have a slightly higher average than the program as a whole, as 47% of their center moniteurs/trices have been trained.

Overall, upwards to 150,000 children are registered at centers; approximately 80,000 of the total are in CRS supported C.N. Coverage is somewhere between 10-20% of the relevant age group. The range is due to the fact that while CRS C.N. enroll children between 6 months to 1 year of age, and graduate them at 5 years, the government sponsored C.N. have the same enrollment policy but graduate children at the age of 3 years. The CRS program alone is reaching approximately five percent of the zero through four age group.

All of the C.N. follow a program which is similar to the functioning of CRS FNP in other African countries but with several added features. Groups of parents are assigned a day to bring their children to the C.N. once a month. Only one child of a family is registered in the program at a time and the mother does not receive a ration. In the case of CRS C.N., the parents make a contribution to the running of the center which amounts to 75 Frw (\$.82) per month. These funds are used to cover the expenses of the center relating to the program, especially, the transportation of the food. In addition, the salaries of approximately 70% of the personnel at CRS centers are paid from these funds, while the remaining 30% are paid by funds from the government or the communes. Any remaining funds are applied to supplies and support of the demonstration activities. At government centers where no ration is provided (12 government centers are included in the CRS program), parents pay a 20 Frw fee on registration, and nothing thereafter.

The child is weighed at each session, and a consultation is held with the parent concerning his progress. The weight is recorded on a master chart of all the children in a given monthly group. This chart translates the data into weight percentages based on the Harvard Standard. At both CRS and government clinics, the child's weight is recorded also on an individual chart which is kept by the mother. The government centers use a "pathway of good health" chart. CRS utilizes its Growth Surveillance System

(GSS) chart, where the weight percentages are recorded month by month to form a "weight path".

If a child has lost weight, a reason is sought. If illness is suspected, the monitrice may require the mother to take the child to a dispensary. At certain C.N., the mother must then present proof of a dispensary visit before she can collect tokens for her ration. At the time of weighing mothers are also required to show to the monitrice the weaning foods she is giving to the child, and these are discussed. Immunizations are often arranged by the C.N., many of which are attached to dispensaries. There is also generally provision for special programs for malnourished children. At most C.N., Fridays are reserved for malnourished children whose mothers have been instructed to bring them on a weekly basis. There are usually also beds available where severely malnourished children can be treated on an in-patient basis.

The special features of the program relate to the emphasis placed on education and the related demonstration activities which are required by government guidelines. Parents are generally required to attend eight weekly sessions without receiving a ration before they are enrolled in the program. They participate in all the activities of the center during this period, and at the conclusion are required to pass a test to show their command of the nutrition lessons. Mothers who fail must continue in the weekly program. The monitrices are trained to teach with regular interaction from the parents, and C.N. generally have visual materials to assist in the training process.

The demonstration activities primarily involve vegetable gardening and small animal raising (mainly rabbits, chickens and ducks). Almost all the C.N. in Rwanda (98%) including both those in the government and the CRS programs, have vegetable gardens and 75% have small animal raising demonstrations. As part of the monthly program, parents work in the gardens and with the animals. The products of these activities are used in a cooking demonstration. Parents are often required to bring wood and food from home to assist in the cooking activities and all children receive a portion of whatever has been cooked. The parents also clean the center before they depart. Collection of the ration is the last activity at CRS C.N., and the program generally concludes around noon.

The afternoons are used by personnel at some of the C.N. to make home visits on the collines (hills) where the families live. This involves many hours of walking in most cases. The center personnel concentrate on households where children are having problems, and can cover at most 80 households in a month. Meetings are also arranged with groups of families from the colline, including those not participating in the program, to explain the activities, and answer any questions. The program is relatively successful in involving men in the activities. Fathers are required to attend when the child is registered and are also generally asked to come to the C.N. for the monthly

program at least once a year.

Approximately 36% of the centers assist parents to start animal raising at home. The mothers are provided animals from the stock of the C.N. to rear, and reimburse the center with young once the animals have reproduced. Accordingly, the centers provide the mothers with growth surveillance, health education and rations to meet the immediate needs of the household, and also provide inputs which will assist in improving the quantity and quality of their production in the longer term.

During the brief review period, only one external study (4) was found which provided an indication of the impact of these related activities. (Obviously, CRS has available considerable monitoring information produced by its staff). The study was carried out in 1983 by Jon M. Cook and Joanne Csete. It was "an ethnographic investigation into the validity of the notion of contractual obligation to participants in the Government of Rwanda/CRS nutrition center program". The study was conducted to provide information on the participant's attitude to the relationship with the C.N. as CRS places considerable emphasis on its supposed contractual nature. The C.N. contracts to provide services, education, and the food rations, and the family contracts to provide a healthy child.

The study found certain problems with this concept in the Rwandan context. The 74 individuals surveyed, who were selected at random at five different clinic sites, generally agreed there was a contract between themselves and the center. However, they saw the contract mainly in terms of their obligations to comply with the rules of the center and were reluctant to suggest there were obligations on the part of the center. In addition, while they recognized that feeding a child well would help him to gain weight, they firmly believed that the reason a child did not gain weight was not because he was improperly fed but because he was ill. Despite these discrepancies from the CRS philosophy, the parents' responses indicated considerable knowledge and absorption of the lessons taught at the centers.

The study also provides an indication of the impact of other center activities. One of the questions of the survey was "If we were to go to your home, what would we find that you do there that you didn't do before you started coming to the nutritional center?" Seventy percent of the respondents said they were now growing fruits and vegetables, while raising small animals, and practicing better hygiene (water, toilets, etc) were each cited by 35% of the respondents. Better child feeding was mentioned by 27% of respondents. Interestingly so, when asked "what do you like best about the sessions at the nutrition center?" 69% mentioned the lessons and educational activities, 38% mentioned the food distribution, while essentially 20% each mentioned being with other parents and seeing my child gain weight.

Clearly, it appears the centers are having a positive impact on the parents, though possibly not in exactly the way CRS intends.

In view of the generally restricted diet in Rwanda, the response concerning the growing of fruits and vegetables and rearing small animals, are particularly encouraging.

#### 4.2 The Multi-Ration Pilot Activity

The provision of multi-rations, now more usually referred to as a "family ration" was introduced into most CRS FNP in Africa some years ago. The larger ration was provided in response to the growing awareness that rations were shared within families so it was not sufficient to provide food only for the child. It is also generally related to the somewhat controversial concept of providing a sufficient economic transfer to the family.

The Rwandan government, and certain C.N. personnel, generally resisted the introduction of a family ration. They believed firstly, that if too much food was provided, it would change the image of the C.N. in the eyes of the participants. They would come to view the C.N. as food distribution centers rather than centers where the parents received education. Secondly, the government personnel, in particular, were concerned about creating dependency on the food supplies. If more was provided, it would be harder for families to achieve the same standard of consumption when their children left the program.

It was eventually agreed that CRS could try the multi-ration on a pilot basis. Four centers initially expressed interest in participating in the experiment, Rwankeri, Rugabano, Gatagara and Ruhengeri. Following a series of meetings to discuss what would be required, Rwankeri, Rugabano and Gatagara decided to participate, and Ruhengeri dropped out. Ruhengeri was later replaced by Kigoma which will be the site of the first experiment in distribution through a commune (discussed in Section 5.3 below).

At each center, CRS permitted the C.N. management to determine who would receive the food. Gatagara, and later Kigoma decided to provide the multi-ration to the entire clinic population. Rugabano and Rwankeri decided to provide it to a selected group of families, but used different criteria to select the groups. Rugabano's criteria was monogamous families already enrolled in the program, which were poor and had or had had gravely malnourished children. The requirement for monogamy was due to the expectation that any double ration would have to be shared with the household of another wife, and hence its effect would be diluted. Rwankeri enrolled families which had participated regularly in the program for the two preceding years.

The first two centers to receive the multi-ration were Rwankeri and Rugabano, who started the program in July 1984. Rwankeri and Rugabano have 44 and 56 households respectively which receive the multi-ration. The program at Gatagara, which involves all 666 families attending the center, started in August 1984. The multi-ration at Kigoma began over a year later, in October 1985, and involves the 500 families enrolled at the center. The normal

ration at the C.N. is 2 kilos of non-fat dried milk, 2 kilos of corn flour, and 1 kilo of vegetable oil. For the multi-ration program, a ration is also provided for the mother, and families are also allowed to enroll a second child if they have two under fives. In the latter case, a triple ration is received. Families pay 75 Frw per ration received, i.e. 150 Frw in most cases and 225 Frw for the triple ration.

CRS also introduced Associated Development Activities (ADA) to a limited number of the families participating in the multi-ration activity. These are intended to enhance the family's ability to provide a better diet for themselves in the longer term. In all cases, the concentration is currently on animal raising. However, the program is encouraging confining the animals so the maximum amount of manure will be available, and is teaching composting techniques. In the longer term, it is intended to introduce vegetable gardening, using the compost as fertilizer. At each of the centers, CRS introduced chicken raising. Gatagara also has certain families who are raising rabbits, while the Kigoma activities are the most varied, involving chickens, rabbits, goats, and cows. Twenty families are participating in the ADA at Gatagara, ten at Rugabano, 14 at Rwankeri, and 41 at Kigoma.

The families were provided with a number of animals depending upon breeding requirements (with the exception of the cows at Kigoma where only one is provided), and in addition, received building materials not available at the homesites. They initially built additional demonstration housing at the C.N. to learn the techniques of construction. Each family was then required to construct the relevant housing for the animals at their homesite prior to receiving the animals. All inputs are in the form of a loan. The animals will be reimbursed with the young which are produced, and the other inputs are to be reimbursed in cash after a grace period. Each C.N. has hired a moniteur to work with the households, which are supervised by an agronome on the CRS staff. A household receives a visit at least once a month from the moniteur and the results of each household's activities were surveyed on a quarterly basis.

#### 4.3 Assessing Whether the Objectives of the Multi-Ration Activity Can Be Achieved

One of the purposes of the consultancy is to review whether the objectives of the multi-ration activity can be achieved. A first task was to identify the objectives as they are somewhat unclear in CRS documents. The principal objective appears to be to provide a sufficient ration to assure the child actually receives a supplement. It should be remembered that in the regular Rwanda program only one child is permitted to be registered at a time and the mother is not registered to receive a ration. There was a general belief at CRS that the single ration was too small (when viewed in the context of sharing within the family including sharing with other children) to insure the child actually received a sufficient supplement. It

also appears that CRS felt the economic value was insufficient to increase the family's overall income to the level necessary to assure improvement in the condition of the child. However, no data are presented to provide support to this latter attitude.

Identifying the other objectives of the multi-ration program is complicated by confusion with respect to its relationship to the additional resources provided for income generating activities which were introduced at the same time. The Operational Program Plan (OPP) states that in addition to receiving the multi-ration, families are encouraged and obliged to participate in development activities in the home setting. However, only a small sub-set of the families receiving multi-rations were chosen to receive additional inputs, e.g. chickens or rabbits, and loans in kind of materials to construct suitable housing for the animals. In addition, these families received regular visits from extension personnel, and the results of the families' activities were surveyed once a quarter. No similar monitoring was carried out to determine whether other families receiving the multi-ration were establishing gardens or animal raising activities, so their participation in these activities was not treated as a condition of continuing to receive the ration.

A somewhat different presentation of the multi-ration program is found in other CRS documents. An example is the letter of 10 April 1984, from the CRS County Representative to the Minister of Health and Social Affairs which described the proposed experiment with the multi-ration program. In this case also, the objective of the experiment is indicated as providing a family with sufficient food to insure that the child will receive a supplement (noted as particularly important for families that have several children). However while CRS commits itself to provide other project resources to improve the family's income level in the longer term, participation in these projects is not presented as a condition of receiving the multi-ration. The letter notes that the increased parents contribution would assist the centers to expand their development activities.

It is also apparent that the center personnel do not view the establishment of home economic activities as a condition of participation in the multi-ration program. These activities are an integral part of the normal program, and parents are encouraged to participate in them. No special commitment was imposed as a condition of receiving the multi-ration.

Review of the feasibility of the CRS pilot program reaching its stated objectives must take account of the different emphases placed on different aspects of the program. First and foremost, it must be determined whether it achieves its primary purpose. The questions to be answered are:

1. Do children in the multi-ration program receive a larger supplement to their regular diet than do children in the single ration program, and similar children not involved in C.N.?

2. Is there any evidence that the doubling or tripling of the economic value of the transfer to the family is having an impact on the household economy which is translated into a better diet for the child?

Both these questions can be determined by reference to income and expenditure analysis and by data on the food consumption of the child. CRS is less concerned with whether the child eats the exact foods provided than with whether the child's diet throughout the month is of adequate quantity and quality. Variables to be looked at include: (1) adequacy of the diets provided to children in households with differing access to rations; (2) evidence of quality improvements in the diet of the child, e.g. special meals preparation, frequency of feeding, variety in the diet including foods such as fruits, vegetables, milk and animal products. Additional quality could come either from home production or purchases.

CRS also emphasizes the importance of increasing family income generation. Information on the differences between households with differing ration composition can be provided by agriculture and food production data and data on income generation. As the C.N. provide special inputs and demonstrations of small livestock raising these should receive special attention. In this case, comparisons need to be made not only of the situation of families receiving no, single and multi-rations, and between multi-ration families who receive extra material and extension assistance, and those who do not.

The questions to be answered with respect to multi-ration families not receiving special assistance should relate to both the quantity and quality of additional efforts:

1. Are the families establishing more vegetable gardens and/or animal raising activities than families in the single ration program and those not in attendance at C.N.?

2. Do they exhibit greater success and return from these or other production efforts?

Finally, the situation of families receiving both the multi-ration and special assistance will have to be considered in relation to the value of their returns in comparison with those derived from the activities of the other two categories of participants. Also, whether the difference in return justifies the additional costs to themselves and to CRS.

## 5.0 ANALYSIS OF CRS ACTIVITIES RELATING TO THE MULTI-RATION

### 5.1 The C.N. Program

The description of the C.N. program activities provided in Section 4.1 is not an ideal, but is the situation actually encountered in the review. Six C.N. were visited, and while it was apparent some programs are better run than others, all were providing the full range of services. The involvement of parents in the center activities includes working on the upkeep of gardens, and substantial contributions in kind in addition to the cotisation. Donations of wood and food were observed at most centers. In addition, at a center where new facilities were under construction, mothers were bringing bricks for building and their husbands were assisting in the construction work.

The education activities at the centers are valuable and cover a range of topics important to improving the situation of families in the countryside. For example, at one center, a lecture was observed on the anatomy of the female reproductive system (complete with suitable visual aids) which was followed attentively by the group of mothers, and the few fathers who were in attendance. As the government recognizes, the structure provided by the C.N. can be utilized as a contact point for all types of extension services. At any one time, coverage of between 10-15% of all households can be achieved through the centers.

The parent's contributions are essential to the running of the centers. Approximately half of all the personnel involved in the entire program in the nation, are paid from the funds, and they also support the educational and demonstration resources which are available. At present, the government has introduced austerity measures in order to keep expenses in line with revenues, and, it would be extremely difficult to find funds to support the program from the budget of the Min Health. The total value of the parent's contribution is on the order of \$850,000 per year. Given the low incomes in Rwanda (estimated at approximately \$270 per capita), many families could not afford to make such a substantial contribution in the absence of the tangible resources provided by the ration (the annual contribution is equivalent to approximately \$10). In most cases, families do have cash resources from commercial crops or off-farm labor, and the center personnel reported no major problems with families paying even the Frw 225 in the case of receiving a triple ration. Where families are especially poor, arrangements can be made with the C.N. for reduced or no payment.

The Rwanda government is considering how it can transfer more of the costs of providing health services to the recipients of services. At present, very little is spent on health services by the population (an estimate is possibly 20 Frw per capita per annum), and the government is considering how to organize a gradual process of increasing fees. The parent's contributions are in line with this policy, but the amounts would have to be

reduced considerably in the absence of the ration. Although a major portion of the funds are utilized on transporting commodities, upwards to the local currency equivalent of \$400,000 would have to be found to cover salaries and other costs.

## 5.2 The Multi-Ration Program

At present, the questions posed in Section 4.3 above concerning the feasibility of the multi-ration achieving its objectives cannot be answered with any certainty given the lack of suitable data. CRS utilizes the GSS to monitor the progress of the children on the multi-ration at Gatagara, Rugabano and Rwankeri. For Rugabano and Rwankeri, the progress of the limited number of children on multi-ration is compared with a sample of children in the regular program. In the case of Gatagara, there is an overall improvement in the weight of the children. At Rugabano and Rwankeri, it appears the children on the multi-ration program may be making less progress than those in the normal program, however, the numbers involved are very small. A variety of factors may be responsible for the results at any of the centers, and an analysis of the intra-familial use of the rations would be required to determine whether children were actually receiving more food than those in families not participating in the multi-ration.

The visits paid to homesites during the review provided information on food usage. The households visited were receiving multi-rations and had attended the C.N. the previous week. When asked how much of the commodities were left, it appeared in general that the corn flour had been totally consumed, and upwards to half of the milk. A much lower portion of the oil had been used, and some of the mothers still had supplies left from the previous month. Given this situation, it is unlikely that the flour and milk provided as single rations last much more than two weeks. Accordingly, whether the child receives an adequate diet throughout the month, in the situation of either the single or multi-ration will depend on the pattern of total food usage in the household, and any impact on the value of the economic transfer. This cannot be established with existing data.

The economic transfer of the multi-ration program was also reviewed. CRS estimates of the local market value of a single ration is 550 Frw. When the cotisation and the value of the time spent by the mother coming to the center is subtracted, the net value is Frw 415, or a yearly value equivalent to approximately \$54. Even considering that some mothers may require additional help to transport the double ration, the value is more than double that of the single ration at \$113 per year. For the average family of 5.3 members, the sum represents about 8% of their total income. Families on the triple ration benefit from a transfer equivalent to \$172 or 12% of the typical annual income. Obviously, the transfer will have even greater impact on a poor household. In this case as well, however, determining whether or not the transfer results in a better diet for the child will require further data.

The C.N. animateurs collected information each quarter on the agricultural production, land availability and socio-economic aspects of the households participating in the ADA utilizing a questionnaire which includes 92 questions. The form is complicated and specially trained personnel are required to develop reliable information on certain of the topics, e.g. size of land holdings. The educational level of the animateurs is not generally high, and there has been considerable turnover in personnel. For these reasons it is not possible to determine whether the data presents a true picture of the situation. For example, the land holdings of families at Rwankeri is only .25 hectare, or one quarter of the national average. This may indicate that the participant households have marginal holdings and experience difficulties producing sufficient food for their households. Or the figures may result from failure to develop information on the full range of fields held by the families.

The data on the experience with raising chickens and rabbits indicates that the household production is considerably less than had been planned. Chickens are affected by problems of disease, predators, and the lack of sufficient food. Despite these difficulties, the families have increased the numbers of chickens kept, and also report consumption and sales of eggs and chickens. Rabbits have done somewhat better but also are affected by disease problems. In this case, the families have eaten very few, and wish to develop markets for the rabbits.

At present it is questionable whether the ADA families at Gatagara, Rugabano and Rwankeri are receiving a positive return from their production efforts although there were obvious differences between the results of households which relate to their own motivation. An example is the results of a young single mother living with her parents who was visited during the review. She had 15 chickens which was triple the number she had received originally and compares with an average of 8.2 among the other families in the program in her area. She reported sales of three birds during the year, and the family had eaten one. She also reported sales and consumption of eggs. However she too had lost essentially half the chicks born to disease.

Assessment of the returns simply in terms of numbers of birds, eggs, sales etc. versus the costs of production is also not sufficient, as the activity may be having an impact on other aspects of the family production. One household visited which was raising rabbits had not consumed or sold any rabbits in a year, and hoped CRS would develop a market. However, they were very pleased with the quantity of manure produced by the rabbits. They had placed it on their bean crop, and achieved a production increase.

The activities underway are pilot activities and CRS is following them carefully and making modifications as they go along. The results are apparent in the improved features of the Kigoma program which has just begun. This area was surveyed by a German farming systems project in 1981 and baseline socio-economic

information was available. The ADA activities were explained to all families by the C.N. personnel who asked them to sign up if they were interested, and 155 households were identified. These households were surveyed using a new form developed by Nelson Bindarye the CRS projects director, and Thaciana Mutumwinka of the CRS staff who is a trained agronome. Ms Mutumwinka and the animateur of the Kigoma C.N. administered the questionnaire. The information collected was more limited and specific. It identified the type of project each family was interested in, the returns which were expected from animal raising, the experience of the households with animals, and the land area available to the household.

In the case of cows, goats, rabbits and chickens, the households expected to achieve the largest return from the manure. The animals would be kept confined, and the households were already familiar with growing fodder grasses. Anti-erosion bunds are present in the area, and are planted to fodder grasses.

The results of the study were reviewed with the bourgmestre, his councilors and the personnel of the health center. Two criteria were used to choose the families to be involved and the type of support: (1) poverty, determined primarily on the basis of the land area of the household; and (2) the animal which the household wished to raise. In the end, 41 households were chosen to participate in the first round of projects. Careful plans have been made for them to reimburse the animals and materials received. The intention is to utilize the repayments to extend the activities to other households on a continuing basis. The households have now been assisted to build the housing for the animals, and the first animals will be delivered to them in February.

### 5.3 The CRS/Rwandan Government Dialogue

As can be seen from the Discussion Points in Annex A, the CRS/Rwandan Government dialogue covered a wide range of topics. Both sides approached the exercise seriously, and held 15 meetings over a period of eleven months, most lasting over two hours. Thirteen representatives of the government attended one or more meetings, and were drawn from the Office of the President, the Ministry of Interior and Communal Development, the Ministry of Finance and the Economy, the Ministry of Public Health and Social Affairs, and the Ministry of Agriculture. A number of CRS personnel have participated also including Rwandan as well as regional staff from Nairobi. Officials of the U.N.D.P., World Food Program and INADES/Formation attended certain sessions as observers.

The round of discussions concluded near the end of the review period. Tentative agreement on the outlines for future program arrangements was reached and CRS will now be working with the relevant national and local government officials to plan and agree the details of activities. Emphasis will be on the commune as the contact point, and CRS will be establishing relationships

and project activities with the bourgmestres and the Counseil Communal de Developpement of the communes. The intention is that activities will involve a double ration with a cotisation of 150 Frw and the relationship to the C.N. activities in the communes will have to be worked out individually. Kigoma commune which contains two of the multi-ration C.N., Kigoma and Gatagara, is to be the pilot area. Kigoma is not an area with the highest rate of malnourishment or of poverty in Rwanda. It was chosen because the bourgmestre was identified by all concerned as a dynamic individual who has created an excellent administration and is actively pursuing the development of the area. It was considered best to create and test new administrative arrangements and development activities in this atmosphere before proceeding to work in more difficult areas.

It is anticipated that the Ministry of the Interior will identify up to ten other communes which CRS will contact to begin a planning effort. The reorganization will thus proceed in stages. CRS will have to describe the planned activities in these communes in its OPP and secure USAID approval for use of the multi-rations in the new areas. To date, approval has been given for use of the multi-ration only in the pilot C.N.

CRS is uncertain at this point exactly how the current C.N. activities will relate to the new structure. It is possible certain communes will not be interested in the C.N. and in these cases development resources would be programmed for other uses and possibly food resources also. However, CRS has the impression from conversations with various bourgmestres that they generally support the C.N. activities and wish to assure their continued operation.

## 6.0 RECOMMENDATIONS

### 6.1 A Food Impact Study of the Multi-Ration Program

The preceding sections of the paper identified the positive features of the CRS Rwanda program as well as some problem areas. The difficulties in determining whether the FNP is reaching its objectives given the data currently available was discussed also. It is recommended that a food impact study be carried out to collect and analyse the relevant information. As CRS's objectives are broader than assuring children have a better and more varied diet, the study will have to cover these broader economic aspects also. The questions to be answered are specified in section 4.3 above. These were discussed with Dr. Ann Fleuret and will be covered by the study design she is preparing.

The information is also needed in the planning and decision making process currently underway. CRS needs more information concerning the value of the food provided, both in consumption and income terms, to make arrangements for the new commune based activities. It should also help to clarify whether the transfer of food is intrinsically valuable in the process of development which CRS is attempting to foster at the household level, or whether another approach might be more effective and/or more cost effective.

A study of food use in the Rwanda program is also recommended in view of the possibility offered for comparative analysis of the impact of differing sizes of food rations. CRS is concerned with developing guidelines for ration sizes for its programs Africa-wide. Rwanda is one of the few countries where there is experience with differing ration sizes, and where the program is still operating mainly on the basis of a single ration. In addition, the homogeneity of the population will facilitate the study as it will be easier to control for external factors.

### 6.2 CRS Program

#### 6.2.1 Clarifying Objectives

It is recommended CRS review its objectives for the FNP and define exactly what it hopes to achieve. This is essential to planning activities as well as defining the inputs required (including amounts and types of food commodities). The definition of objectives is also required so that arrangements can be made for monitoring impact and achievements. It is the consultant's impression CRS currently has a variety of partially defined objectives. Some conflicts are arising also as there appears to be a transition from feeding objectives to development objectives.

At present, the overall goal of CRS activities might be expressed: To improve the nutritional status of children under five. This goal may be revised as a result of the CRS/Government

dialogue: to increase the incomes and nutritional status of poor households. Whether or not the households will have to include children under five has not been established.

The purpose level of activities could originally be expressed in feeding terms, i.e. to increase the quantity and quality of foods consumed by children under five. A further purpose was later added, i.e. to increase the income of poor households with children under five. This was to be achieved through the income value of the food commodities provided and more recently through the medium of activities designed to increase the food production of selected households.

The transition to development purposes can be seen both in terms of what CRS wants to achieve at the household level and the means to be used. The evolving purpose might be expressed: to establish a capacity within poor households to provide an adequate level of nutrition for themselves and especially their young children. The established mechanism for achieving the purposes is the C.N. which require open-ended support. CRS is now working towards the establishment of local level management structures and resources (including revolving funds) which will be capable of organizing and supporting on-going development activities for poor households. Hence, the purpose of activities can be seen in a community development context as well as in the context of the food consumption of selected children.

The new orientation of the program is positive. Involvement of the local community in planning and organizing activities, and in identifying households requiring special assistance has the potential to result in better targeting and better results which can be sustained over time. CRS has helped to create a quality extension structure in the C.N., and is in the process of creating links and organizational arrangements with the communes. However, if the activities are to be explained to CRS headquarters and to donors, the purpose will have to be clearly stated. In addition, what resources, including food commodities should be provided, to whom, and in what form (e.g. free distribution, subsidized distribution, sale) will be dependent on the project purpose.

#### 6.22 CRS/Government Relationship with Respect to the Centre Nutritionel

CRS has taken the initiative in creating a new working relationship with the Rwandan government which should result in excellent prospects for future activities. The only recommendations arising from the review with respect to the CRS/Government relationship concerns the value of creating a uniform national nutrition program. CRS believes it can only supervise 100 C.N. in a country to the desired standard given administrative constraints. CRS has essentially reached that limit in Rwanda and is supporting 62% of the centers.

Government officials wish to create a uniform national program, and believe that it is possible within current or planned resource levels by improving the targeting strategy. That is, by involving local professional personnel and representatives of the families in identifying truly needy families to receive rations and by graduating children from the program at the age of three. CRS emphasizes the preventative nature of its program and is concerned that attendance will drop or become irregular among parents not receiving the ration. The government officials agree that attendance is more sporadic at centers not supported by CRS. However, they believe this is partially due to families learning of other centers they can reach which distribute CRS commodities. This is a bigger problem in Rwanda than elsewhere given the small size of the country and the dense population. The government nutrition officials believe that attendance of all families can be maintained through enhanced promotional efforts, and concentration on the services provided at the centers, especially when ration distribution is carried out at a different location.

CRS is somewhat sceptical and understandably so given its long experience with programs in a wide variety of settings. However, it is the consultant's opinion that the special circumstances in Rwanda provide CRS with an opportunity to support the establishment of a uniform national program which could be self-supporting with local and national government resources and user charges in the long run. This result is desirable from all points of view. It is recommended that CRS review how it could work towards a uniform program in the context of the changes which will take place in any case in establishing commune based operations.

#### 6.23 Resources Required For New FNP Activities

As the CRS program activities become more development oriented, it is necessary that attention is paid to the resources other than food required for projects. With respect to the current livestock raising efforts, it is recommended that CRS procure local consultant assistance to identify solutions to the problems faced by the households (see Section 5.2 above). In future, it is recommended project budgets include provision for such consultancies, and for regular training of local extension personnel as well as any materials needed for project activities. Consideration could be given to supporting these expenses through the monetization of a portion of the food commodities.

## 7.0 CONCLUSIONS

The CRS Rwanda Food and Nutrition Program (FNP) includes features which evaluations have found to be correlated with positive improvements in nutrition levels: a growth surveillance system, provision for treatment of severe malnutrition cases and referral to health services, a full program of nutrition education, and demonstrations of gardening, small livestock raising and cooking. The FNP is well organized and the quality of services provided is impressive. Available evidence indicates attendance is regular, and that households are learning, and applying the education provided at the centers. The CRS program is integrated into the nutrition services of the government and 60% of all Centres Nutritionels are supported by CRS. The funds contributed by parents attending the centers support the salaries of approximately half of all staff in the national system.

Determining whether the multi-ration program, as distinct from the FNP, is achieving its stated objectives, is difficult for several reasons. The objectives are somewhat unclear, and there appears to be a transition from feeding objectives to development objectives. In the first instance the objectives would be achieved if children under five received a better diet. In the second case, the objectives are to improve immediate consumption, and also to increase the capacity of households to provide a better diet for all their members, and especially the young children. CRS's objective is also to target on poor households, and to establish local level management structures and resources to provide on-going development activities for these households. It is recommended that CRS establish precise objectives for the program. For the present, analysis of whether objectives are being achieved will have to cover all the aspects outlined above.

Further difficulties in determining whether objectives are being achieved result from the data currently available. The information cannot be used to establish whether children in households receiving the multi-ration are actually receiving more food than those in single ration households or those not involved in the program. In addition, no information is available on the economic impact of the multi-ration in households receiving the multi-ration, but not receiving special assistance from CRS for small livestock raising. Finally, the full impact of the multi-ration plus additional assistance is unclear. Despite considerable effort on the part of CRS, the quality of the actual data available is suspect, given the complicated nature of the questionnaire used, and the qualifications of the individuals collecting the information.

A study of the impact of the multi-ration is recommended to provide the necessary data. The information is needed also for informed decision making on the programming of food commodities both in Rwanda and in the CRS FNP in other countries. The data is especially critical in the current context of the requirements to move from food distribution at the C.N. to distributions through the communes. The investment is fully justified by the

value of the existing nutrition extension system CRS helped to create and the continuing contribution which it can make in Rwanda. The information will also assist in realizing the full potential of the new emphasis on a development orientation in the CRS program.

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Annex A

DISCUSSION POINTS

1. We would like to test the new Program orientation in two Prefectures.

- Which Prefectures do you recommend?
- Is it feasible to consider January 1986 as a tentative starting date?

**Interior and Agriculture**

2. What size of family ration ought to be given in order to have an economic impact on the family budget?

**Health & Social Affairs, Finance & Economy**

3. To whom ought the family's contribution be paid? How ought it to be divided between the participating bodies (ie Nutrition Centers, Communes)?

**Health & Social Affairs, Interior**

Note: We do not wish to see any significant increase in the cost of the Program to the families.

4. Where might we stock the commodities to be distributed? Who will be legally responsible for them? Who will distribute them?

**Interior**

5. What quantity of food should we continue to give to Nutrition Centers for the gravely malnourished?

**Health & Social Affairs**

6. What Communal infrastructure will we be able to collaborate with? What will we be able to expect of them? For example, will we be able to collaborate with

- a) the Centres de Formations
- b) the Communal/Sectorial agronomists
- c) the Communal leaders and the Chefs de Cellules?

Note: We in no way wish to overload the above mentioned, but only examine if we could realistically count on their collaboration. If not, we must take this into consideration.

**Interior and Agriculture**

7. How might we choose which families are to start implementing developmental projects? How and by whom will they be animated? How will their participation be verified?

**Interior, Health and Social Affairs, Agriculture**

8. How will Nutrition Centers and Communes collaborate? Also, Maternities and Communes? How will this collaborate be assured of continuation?

**Health and Social Affairs, Interior**

9. How can our projects be integrated/coordinated with projects already implemented in various communes? **Prefets**

10. For how long should a family remain enrolled in the CRS Program?

**Health & Social Affairs, Agriculture**

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