

PROJECT ASSISTANCE COMPLETION REPORT

Applied Nutrition Education Project
No. 517-0174

PD-ABC-584

121 678 37

I. BACKGROUND

The Applied Nutrition Education Project (ANEP) was initiated in 1972, as part of the phasing-out of the Catholic Relief Service (CRS) PL-480, Title II Program in the Dominican Republic. It was a radical change in strategy, because after more than 25 years of food distribution, the program introduced a multidisciplinary approach designed to reduce malnutrition without distributing Title II foods. The program was carried out in approximately 120 communities with pre-existing community organizations and history of interest and participation in group activities. At the community level, some 27 promoters, who were community members, were trained by ANEP to provide education in nutrition, health, agriculture and other areas. Until 1983, the ANEP program was funded by CRS and CARITAS Netherlands and was partially supported by PL-480 local currency generations.

An evaluation of the ANEP program conducted in 1982 did not consistently show significant improvements in nutritional status among program participants. Partly in light of this finding, AID funded an Operational Program Grant (OPG) to CRS and CARITAS/Dominicana, beginning in June 1983. At this time, CRS increased its participation in reorienting and restructuring the ANEP program.

II. PURPOSE OF THE PROJECT

The purpose of the ANEP project was to improve the nutritional status of children under five years of age and pregnant and lactating women, and thereby decrease rates of mortality and morbidity, through community development strategies promoting self-reliance in Primary Health Care, increasing people's awareness and motivation and providing effective health and nutrition education. The following objectives were to be accomplished:

A. Stimulate and support local and external initiative in the development of solutions to community problems through the establishment and promotion of group activity to increase knowledge in the areas of health, nutrition, sanitation, agriculture, employment and general community development.

B. Create positive changes in food consumption behavior, particularly in vulnerable groups, by: (1) building knowledge of nutrition in the community and surrounding areas, with emphasis on breastfeeding and weaning practices and the differences between basic nutrition principles and community food beliefs; (2) improving skills in food preparation and

preservation; (3) encouraging consumption of community produced foods; (4) encouraging consumption of nutritious foods not presently utilized in the communities; (5) utilizing external food sources in conjunction with nutrition education, only where the local food supply or family access to food is inadequate; and (6) increasing incomes.

C. Increase the availability of nutritionally superior foods in the community, by: (1) encouraging diversification of family and community food production; (2) providing support services for agricultural production, such as seeds, plants, and credit; (3) encouraging better local agricultural techniques, such as irrigation and naturally occurring fertilizers; and (4) encouraging and supporting the breeding of poultry and livestock.

D. Improving health and sanitation practices in the community, by: (1) encouraging the construction and use of latrines; (2) increasing knowledge in and practice of first aid and oral rehydration techniques; (3) encouraging and supporting the use of potable water; and (4) increasing knowledge of prevention of common local health problems.

E. Increasing employment opportunities in the community, by: (1) developing skills in agriculture and animal husbandry; (2) providing financial and technical support for the initiation of communal projects; and (3) promoting the commercial potential of these projects.

Secondary goals were: (1) the development of a system for collecting and monitoring anthropometric and other data; (2) the development of nutrition education instruction and materials; and (3) the development of new and in-service training programs and seminars.

III. BENEFICIARIES

A. Direct Beneficiaries

The primary beneficiaries of this program were to be the community members who belonged to mothers' and womens' clubs, agricultural associations, youth groups and other groups, and the target population of pregnant women and mothers, their infants and children.

B. Indirect Beneficiaries

1. Other family members of community group participants were to have benefited because of the increased knowledge, support and skills of group members, which would result in improved intra-family food distribution, better infant feeding and weaning practices, improved diets, greater food availability, better health and sanitation practices and increased incomes.

2. Participants from other community groups in the regions were to have benefited through exposure to the experiences and knowledge generated by the program.

3. Promoters and area supervisors selected by the communities to participate in the program were to have developed leadership and other skills, increased their incomes and developed a greater sense of self worth.

C. Additional Beneficiaries

Private and public organizations working in the areas of nutrition, public health, agriculture and community development were to benefit from the following:

1. The anthropometric data generated, compiled and evaluated, contributing to the understanding of health and nutrition status in rural areas in the Dominican Republic.

2. Nutrition education materials and new, more effective teaching techniques, developed and implemented under the project.

3. The agricultural components of the program, resulting in increased community food resources and providing a testing ground for new, effective agricultural and animal husbandry techniques.

IV. STATUS OF THE PROJECT AT THE PACD

By the PACD, the project had experimented with the following methodologies, which were previously unknown to CARITAS and other agencies in the Dominican Republic: systematic growth monitoring; a targeted, door-to-door educational program, with materials developed using social marketing techniques; regular, extensive data collection and an internal evaluation system; and a centrally monitored, strict planning and financial control system. These activities made CARITAS ANEP staff more technically qualified and highly motivated.

Between late 1986 and early 1987, a formal external evaluation was performed by José O. Mora, M.C., Nancy Pielemeier, D.P.H., Patricia Avila de Hails, M.S. and Marisela Ramirez, M.A. The major objectives were:

A. To examine the program implementation process and its components (community organization and development, growth monitoring and nutritional surveillance, nutrition education, community projects, etc.)

B. To establish the extent to which program goals and objectives were achieved.

C. To assess the impact of the program on infant and child feeding knowledge and behavior and on the nutritional status of children under five years of age.

D. To determine the cost and cost-effectiveness of the program.

Evaluation of program impact was made in the following areas: (1)

changes in mothers' knowledge of infant feeding and child care, and in feeding and health care practices related to the educational messages conveyed under the project; and (2) assessment of the nutritional status of the target population of children under five years of age.

The major conclusion of the impact evaluation was that the systematic implementation of an integrated package of growth monitoring and nutrition education activities with coverage of populations at risk and within a grass-roots developmental strategy, significantly reduced the prevalence of child malnutrition in the target communities. Program effectiveness is attributed to efficient planning, design and implementation of technically sound strategies for growth monitoring and nutrition education within a grass-roots, participatory community approach. Consciousness-raising, individual and community motivation and the promotion of self-reliance, self-confidence and individual initiative, enabling people to assume responsibility for their destiny, constituted an efficient and effective framework for delivering systematic growth monitoring and nutrition education interventions. This was an effective entry point to facilitate continuous person-to-person interaction between highly motivated community volunteers and mothers, families and the community.

The following were major factors leading to the project's success in significantly improving the nutritional status of children:

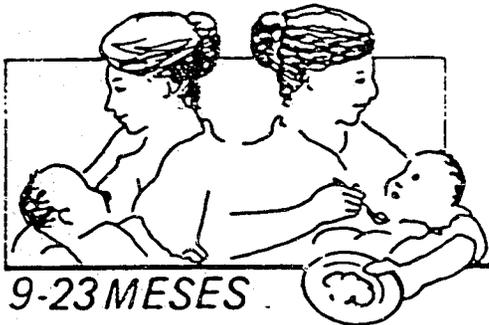
- A) Selection of appropriate communities.
- B) Selection and effective training of appropriate personnel.
- C) Continuous supervision of personnel and maintenance of motivation.
- D) A technically well-defined and integrated growth monitoring and nutrition education program.
- E) An effective communication strategy.
- F) A simple and efficient information system for surveillance and ongoing evaluation.

The number of children who recovered from moderate and severe malnutrition as a result of the project was estimated by subtracting the number of cases of malnutrition at each 6-monthly weighing from the number of cases observed at the September 1984 weighing. Calculations are shown in Table 1.

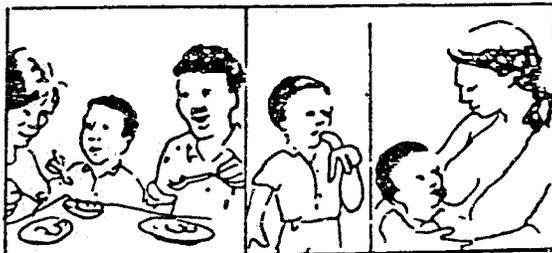
**RECOMENDACIONES
0 - 4 MESES**



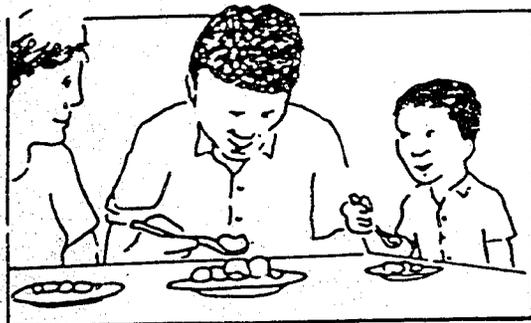
5 - 8 MESES



9-23 MESES



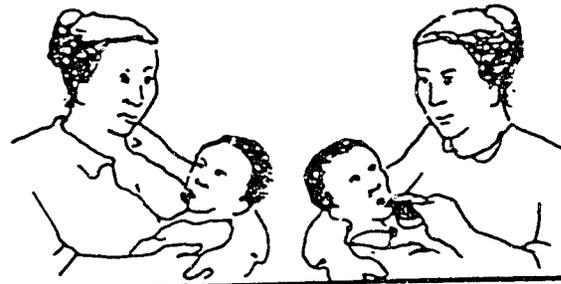
2 - 5 AÑOS



**MAMA, CHEQUEE CON EL PROMOTOR
LA VACUNACION DE SU HIJO.**

TIPO	1º	2º	3º	REF.
Polio				
DPT o Triple				
Sarampión				
Tuberculosis				

**MAMA, SI SU NIÑO
TIENE DIARREA
DIGASELO AL PROMOTOR**

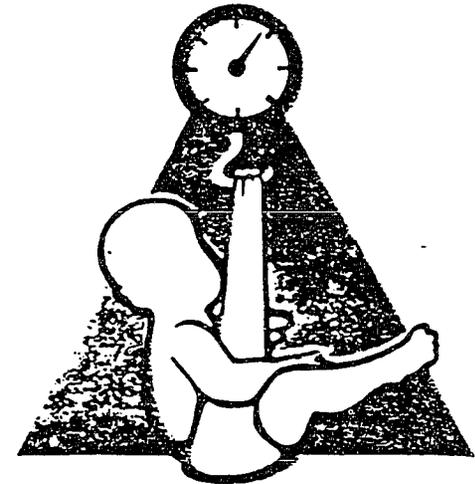


**DELE LIQUIDO
INMEDIATAMENTE
COMIENZE LA DIARREA**

**DELE LIQUIDO POR
CADA EVACUACION.**



**NIÑOS SANOS,
COMUNIDAD FUERTE**



MADRE _____

NIÑO _____

FECHA DE NACIMIENTO _____

FECHA PRIMERA PESADA _____

PROMOTOR _____

COMUNIDAD _____

**PROGRAMA DE EDUCACION
NUTRICIONAL APLICADA**

CARITAS DOMINICANA

**FIGURE 1
GROWTH CHART**

CURVA DE CRECIMIENTO PARA NIÑOS DE 0 A 5 AÑOS

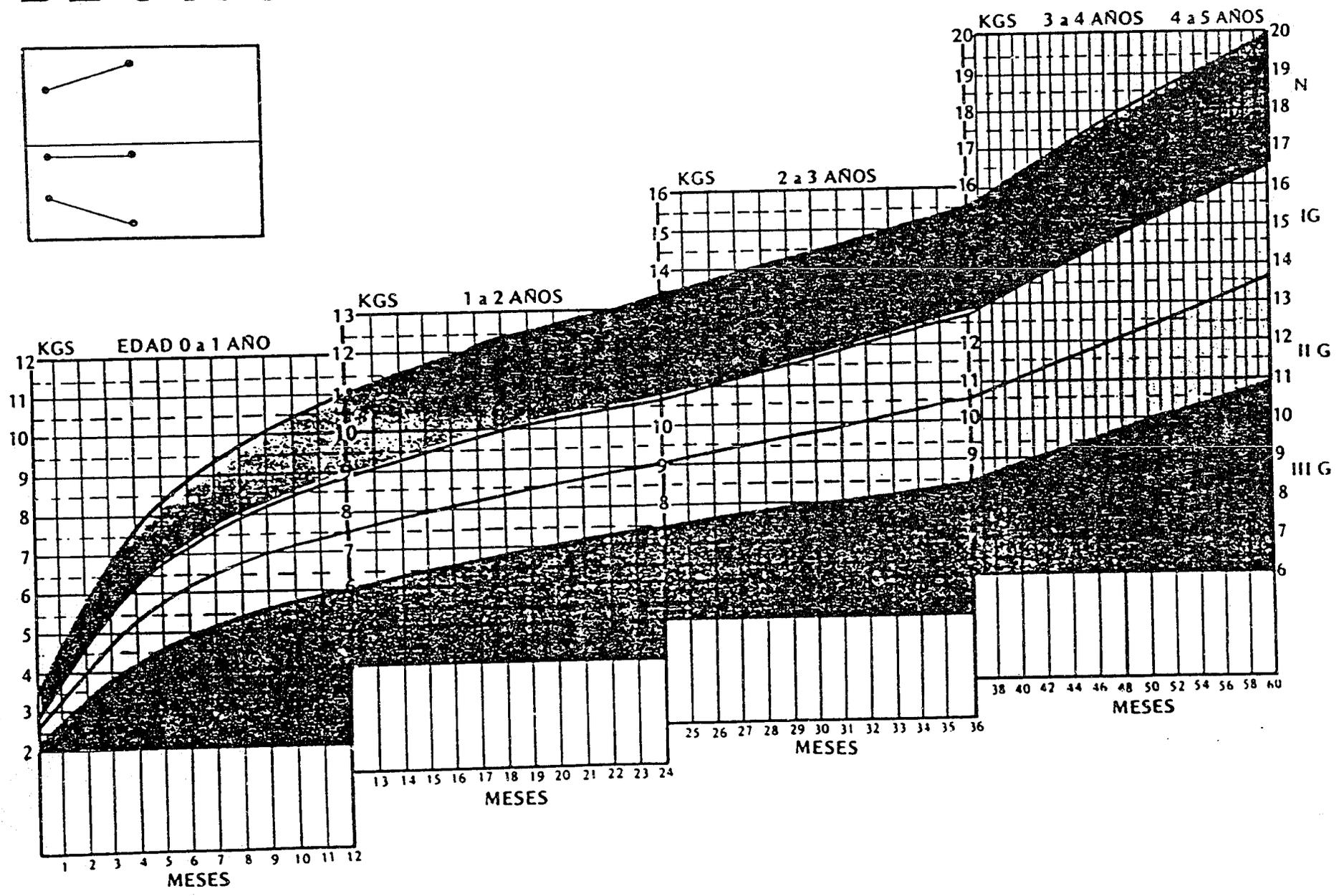
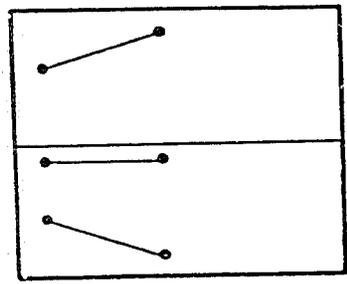


FIGURE 1 (back)

TABLE 1

	<u>9/84</u>	<u>3/85</u>	<u>9/85</u>	<u>3/86</u>	<u>9/86</u>	<u>3/87</u>	<u>9/87</u>	<u>TOTAL</u>
Number of children weighed	2,816	3,862	4,348	4,169	4,245	3,389	4,223	27,052
Proportion malnourished (less than 75% of standard weight-for-age)	12.2%	10.4%	9.1%	7.6%	6.9%	5.4	5.4%	
Number malnourished	344	402	396	317	293	183	228	2,163

The evaluation determined that the cost per beneficiary of the program was as follows*:

TABLE 2

	<u>Cost/Beneficiary</u>	<u>Cost/Beneficiary/Year</u>
Cost excluding TA	\$34.76	\$23.17
Cost including TA	\$38.87	\$25.91

* The number of beneficiaries was defined as the total number of children ever enrolled in the program, or 8,798. Costs per beneficiary per year were estimated based on the assumption that the average length of participation during the first 3 years of the project was 1.5 years.

V. PROJECT OUTPUTS

A. Growth Monitoring and Education Materials

To help promoters provide appropriate advice during growth monitoring home visits, ANEP developed a set of 17 drawings ("láminas"), whose messages are described in Table 3. Each drawing is illustrated on one side with a description of an educational message (Figure 2). The following are other communication materials designed under the project:

TABLE 3. (continued) MESSAGE CONTENT OF THE CARD-DRAWINGS FOR INDIVIDUAL EDUCATION

CHILD'S AGE, FEEDING
PATTERN AND GROWTH

EDUCATIONAL MESSAGES

9-23 Months
Not Gaining Weight

1. Give child what family eats. Do not add water.
2. Give 4 feedings and 2 snacks daily so child gains weight.
3. Continue breastfeeding.

0-23 Months
Not Gaining Weight

1. Boil drinking water for 10 minutes so child does not get diarrhea.

2-5 Years
Gaining Weight

1. Congratulate mother because child is gaining weight.
2. Give child all family eats 4 times a day and snacks between meals so that child grows well.

2-5 Years
Not Gaining Weight

- A.1. Give child 5 feedings and 2 snacks between meals. Child needs to eat many times a day so that he/she gains weight.
- A.2. Give child all what family eats, because child needs it to grow well.
- B.1. Wash child's hands before feeding so that he/she does not get diarrhea.
- B.2. Wash your hands after defecation and after changing child.

0-5 Years
Child With Diarrhea

1. Continue breastfeeding more times a day to help child recuperate liquids lost.
2. Give liquids for each evacuation as soon as diarrhea begins to recuperate liquids lost.
3. Give soft food such as mashed banana or mashed potatoes. The child will retain some food that will help recuperate soon.

Figure 2
EXAMPLE OF A CARD-DRAWING (LAMINA)
BACK

**0 - 4 MESES
NO DANDO SENO
NO GANANDO PESO**

**DAR CUALQUIER TIPO DE LECHE LIGADO CON CEREAL.
DAR ESTOS ALIMENTOS CON UNA CUCHARA**

(PR JUNTAS PARA HACER A LA MAMA.
E PROMOTOR DEBE ESPERAR LAS RESPUESTAS Y REFORZAR LOS MENSAJES.)

- ¿QUE TIPO DE ALIMENTOS LE DA AL NIÑO DIARIAMENTE?

**LIGAR LA LECHE CON ALGUN CEREAL COMO: ARROZ, AVENA, HARINA DE MAIZ; PORQUE
LA LIGA ALIMENTA MEJOR Y SU NIÑO CRECERA BIEN.**

- ¿COMO LE DA LOS ALIMENTOS AL NIÑO?

DAR LOS ALIMENTOS CON UNA CUCHARA PORQUE SE PUEDE LIMPIAR MAS FACILMENTE

- ¿QUE VA A HACER EN EL PROXIMO MES PARA AYUDAR A SU NIÑO A CRECER MEJOR?

**LIGAR LA LECHE CON ALGUN CEREAL PARA QUE SU NIÑO AUMENTE DE PESO.
USAR PLATO Y CUCHARA PORQUE SE PUEDE LIMPIAR FACILMENTE.**

OBJECTIVE

EDUCATION/PROMOTION MATERIALS

Promote the program

Brochure
Semestral bulletin
Press releases
Home sticker and ANEP's symbol
Calendars

Enhance the prestige of
the promoter

Trimestral bulletins
Poster
Calendar
ID Card

Promote Growth
monitoring

Individual growth chart
Community growth chart
Flipchart and audiocassette on the
the importance of periodic weighing

Promote better feeding
practices

Set of individual cards (láminas)
Leaflets of worksheets to serve as a
reminder for the mother to check
daily on the number of feedings
given to the child.
Flipcharts and audio-cassettes
about boiling water and feeding
between 5 and 8 months
Flipcharts on oral rehydration and
breastfeeding.

In addition, the program produced action flyers to facilitate the reinforcement of messages in the láminas, for the mothers of children who did not gain weight. The version circulated at the end of the project includes boxes in which the mother or promoter can write or draw the agreement they have reached regarding what the mother will do during the next month to increase the weight of her child.

B. Other Communication Materials

Four mini-workshops (one each on ORT, ARI, Growth and Child Development and Low Birth Weights) and 10 radio jingles based on the program's nutrition and health messages were completed and are being transmitted via Radio Santa María to the diocese of Santiago and La Vega.

C. Community Development

The ANEP project focused extensively on nutrition surveillance/growth monitoring, ongoing internal evaluation and integrated communication/education. It did not, however, focus adequately on community works, because of inadequate financial resources and little support received by area supervisors. Community works were more successful in regions where there was more coordination/support from the CARITAS diocesan office and/or parish social pastoral teams. Examples of successful community development projects include the water/latrine projects in the parish of Las Matas (Diocese of San Juan), the parish of Pimentel (Diocese of San Francisco de Macoris/Nagua), and in El Manantial (Diocese of Mao). One of the major difficulties was the inability to dedicate the time needed to support organized community groups on a regular basis. In the dioceses of Mao and the parish of Las Matas de Farfan, additional personnel were appointed to assist the ANEP area supervisors, so gardens, cow projects, and water projects were successful.

D. Health Committees

Health committees were formed in 36 of 63 communities.

E. Other Productive Projects and Income Generating Activities

Community project funds were granted under an allocation received by CARITAS from the Interamerican Development Bank (IDB) and/or CARITAS funds budgeted for this purpose. ANEP was committed to providing RD\$75,000 over a three-year period to finance 8 to 10 projects in the first year, at an average cost of RD\$2,500 to RD\$3,500 per project, including a 25% contribution from the community. As shown in Table 4, only ten community projects in nine communities were initiated during the LOP. Four were swine projects, three dealt with cattle raising and three with agricultural production. About 200 families participated, for an average of 20 families per project. The loans provided to support them ranged from RD\$1,510 to RD\$12,147. By the PACD, CARITAS had recuperated RD\$56,032, or 94% of outstanding loans.

The outcome of these projects has been mostly unsatisfactory. One cattle and one agriculture project were successfully implemented and benefited the 32 participating families. Two cattle and one swine project also had good outcomes, but did not fully meet expectations. Two agriculture and one swine project have had a fair outcome so far, and two swine projects have been clear failures. As a result of this experience, it was determined that swine projects are the least likely to succeed.

Other income generating projects were a rotating fabric fund for the community of Pimentel in the diocese of San Francisco de Macoris and a community store in La Gina, Higüey. A proposal for an irrigation system in El Aguacate, also in the diocese of San Francisco de Macoris, is under review.

F. Water and Sanitation Projects

More than 20 communities benefited under this component (Table 5). Each water and sanitation project included a sanitary education component. However, the timing, intensity and simplicity of the education component should have been improved in order to obtain the desired impact.

G. Gardens

Since 1985, 348 pounds of seeds, donated by Servicios Social de Iglesias Dominicanas (SSID) and Secretaría de Agricultura (SEA), at a cost of US\$1,125, were distributed for vegetable gardens. 3,352 gardens were planted and/or replanted. Most of the gardens were for household use, but some community gardens were also planted.

TABLE 4. COMMUNITY PROJECTS CARRIED OUT BY ANEP

REGION	COMMUNITY	TYPE OF PROJECT	NO. OF PARTICIPATING FAMILIES	OUTCOME
Mao-Montecristi	Piedra Blanca	Cattle	8	Good
La Vega	Jarabacoa	Cattle	8	Very Good
	Río Verde Abajo	Cattle	18	Good
San Francisco	Aguacate	Agriculture	24	Very Good
	Aguacate	Agriculture	20	Fair
	La Travesía	Agriculture	11	Fair
San Juan	Las Mulas	Swine	20	Poor
	Villas Los Indios	Swine	22	Poor
Santo Domingo	Batey San Pedro	Swine	38	Fair
	Batey Los Guineos	Swine	27	Good

TABLE 5. WATER/SANITATION PROJECTS CARRIED OUT BY ANEP

REGION	COMMUNITY	TYPE OF PROJECT	NO. OF COMMUNITIES	OUTCOME
San Francisco	Nagua	Wells	1	Good
	Pimentel, Los	Solar	1	Good
	Limones	Aqued.		
	Pimental	Wells and latrines	10	Good
San Juan	Las Matas de Parfan	Well & Latrines	4	Good
	La Sierra	Aqueduct	1	Good
	Sabana de las Mulas	Aqueduct	1	Good
Mac	El manantial	Water catchment system.	1	Good

BEST AVAILABLE

VI. POST-PROJECT A.I.D. MONITORING RESPONSIBILITIES

Monitoring during the disbursement period was completed on the PACD of April 15, 1988. A request to the USAID/DR Controller's Office to stop payment on a check never received by CRS, New York, will be followed up until a new check is issued. A US\$28,245 Rapid Response Grant under the USAID/DF Child Survival Project (517-0239) has been provided to CARITAS as interim funding until ANEP can be fully integrated into the Child Survival Project in SESPAS Health Regions IV, VI and O.

CRS has also requested funds from IDB to continue expanding the program in other areas of the country.

VII. EVALUATIONS REMAINING TO BE UNDERTAKEN

None.

VIII. LESSONS LEARNED

The followings lessons were learned from the Applied Nutrition Education Project:

A. Growth Monitoring/Promotion. It was demonstrated by the evaluation that it is more cost effective to prevent malnutrition through growth monitoring than to cure it. It was also demonstrated that the growth monitoring process provides families with nutrition education which increases the mother's and family's capacity and self-assurance to make decisions, thus increasing their ability to better care for their children.

B. Messages and Materials. The educational materials were well accepted and contributed to changed behavioral patterns of most mothers. However, since it appears that older children in the target population are at a higher risk than those in other populations and program impact has been substantially lower among children above two years of age, changes in emphasis and developing of new materials should be explored. As new themes are identified, new messages must be continued to be developed. As mother's KAP's improved and/or new problems arise, messages need to be adapted, changed, deleted or added.

C. Radio Program. Since there was low audience reception of radio in rural areas and a relatively small number of communities covered, ANEP must repeat its baseline study and evaluate the results before radio jingle messages are transmitted nationwide.

D. Community Development. In light of the results of the community development projects, it is believed that to maintain positive change under the current economic situation and to have a real impact, additional attention and support must be given to this component of the project in order to increase access to credit and availability and use of potable water and sanitary facilities.

IX. RECOMMENDATIONS FOR PROGRAM EXPANSION

One of the objectives expressed in the original project proposal was that ANEP be expanded and decentralized. Efforts were to be made to strengthen regional and local technical and administrative capabilities, to enable the regional level to progressively take on more of the responsibility of program implementation. However, this was only partially accomplished and should be given higher priority now. Decentralization will require careful acceleration of the transfer of autonomy to the diocesan level, in a progressive but sustained way, beginning with administrative duties and continuing with the more technical aspects of training and supervision. Decentralization will also be important to strengthen program implementation and ensure sustainability in the long run. In decentralizing, as CARITAS plans to do, care should be taken to preserve the key components of the current program and to strengthen other aspects of central support to the regions.

Mission Approval:

Thomas W. Stukel
Mission Director

Financial Contributions of A.I.D., CRS and CARITAS

COMPONENT	CRS		CARITAS		USAID		TOTAL	
	Planned	Actual	Planned*	Actual	Planned**	Actual	Planned	Actual
Salaries & Benefits	128,985	151,330	65,800	54,306	170,322	168,197	365,107	373,833
Rent & Utilities	1,080	4,752	8,765	1,056	3,464	3,211	13,309	9,019
Equipment, Supplies & Materials	1,600	17,180	8,410	2,790	36,034	38,894	46,044	58,864
Vehicles (Procurem.)	-	-	-	-	61,088	57,932	70,668	66,322
Vehicle, Maint. & Transp.	3,775	-	12,959	17,545	30,384	26,554	47,118	44,099
Per Diem	3,150	6,000	-	-	45,797	35,391	45,797	35,391
Printing	-	-	-	-	41,804	37,746	41,804	37,746
Transportation	-	-	-	-	15,667	14,797	15,667	14,797
Radio Program	-	-	-	-	7,998	6,303	7,998	6,303
Evaluation	-	-	-	-	15,500	9,054	15,500	9,054
Community Projects	-	89,750	75,000	18,000	-	-	75,000	107,750
Overhead CRS/NY & CARITAS	-	-	-	-	43,607	32,361	43,607	32,361
Contingencies	-	-	-	-	13,735	15,520	13,735	15,520
TOTAL	138,590	269,012	170,934	93,697	495,000	454,350	801,354	811,059

*At beginning of project US\$1.00 = RD\$1.00; at EOP US\$1.00 = RD\$5.00

**As of revised budget of 09/30/87.

Drafted by: *Wise*
HPD:MCastillo:mac
10/24/88 - Doc. 1711h

PDS

Clearances: *Wise*
A/HPD:LEarly _____
CRD:LArmstrong _____
PRG:TCornell _____
MGT:RFascell _____
CONT:TBebout _____
DD:RRifenburg _____