

Calorie Supplementation of Grain Foods1. Summary

At present, AID is funding three projects involving the amino acids or protein supplementation of cereal foods (rice, wheat, corn). Each of these projects includes carefully maintained control villages receiving vitamin, mineral and amino acid or protein concentrate supplementation.

There is currently considerable debate regarding the relative merits of protein versus calorie supplementation. The ongoing projects, when completed, will provide a very carefully controlled baseline from which to measure the effect of calorie supplementation. The proposed research builds upon these ongoing projects. The intention is to add an adequate calorie supplement into the experimental design of the existing project in order to field demonstrate and determine the impact on child growth of calorie supplementation alone, in combination with minerals and vitamins and in combination with a complete supplement including protein. This research should help clarify uncertainties regarding protein and calorie interrelationships in human nutrition, particularly whether calorie supplementation will alleviate specific deficiencies or whether protein and/or vitamin and mineral supplementation is necessary.

Estimates are \$700,000 for expanding and extending the current wheat and corn projects in order that they include a calorie component. This figure represents approximately \$285,000 and 350,000 for the corn and wheat projects, respectively, over a period of three years and \$65,000 for a conference. The Co- project is contracted with PAHO/INCAP and the wheat project with Harvard University.

2. Research Purpose and Expected Products(a) Purpose

The purpose of this research is to determine the significance of calorie supplementation to cereal diets when other nutritional factors, such as protein, vitamins and minerals, are controlled. The project will be considered completed when 2 to 3 years of collected data are analyzed for the affect of calorie supplementation on child growth, birthweight, morbidity and mortality.

(b) Products

The products of this research will be the analysis of field data that establishes what impact calorie supplementation, alone and in combination with other nutrients, has on the growth of young children.

3. Significance and Rationale for the Research

(a) Significance

The significance of this research is that it should clarify uncertainties regarding protein and calorie interrelationships in human nutrition.

(b) Rationale

There is an increasing demand for protein because of an increasing world population and the growth of affluence in certain world countries. This situation has created high prices for protein commodity foods and a skewing in distribution of protein away from the deprived populations. Such shifts have made many governments and responsible agencies sensitive to the protein needs of large segments of LDC populations, in particular infants and children. In efforts to reverse this trend, emphasis has been placed on meeting the protein demands of LDCs. Governments and agencies are now re-evaluating the total nutrient needs that must be addressed in order to insure effective utilization of each individual nutrient.

For optimum protein utilization, the body must first satisfy its energy (calorie) needs. Under conditions of surplus protein utilization, a more efficient use of LDC protein resources will be attained only through increased calories from other sources.

Several years ago the Agency initiated three projects with the purpose of testing the premise that amino acid fortification of certain cereal foods would result in a significant growth response in children. These field studies are still being conducted; however, all are near completion. Preliminary data suggest that calorie supplementation may be essential to meet priority nutritional needs. It is recommended that two of these projects be both expanded and extended into new research projects with the important modification of incorporating a calorie factor into their experimental design. In this manner, human field data can be collected regarding calorie-protein interrelationships.

4. Plans to Coordinate Research - Including Networks

The rice (Thailand) and corn (Guatemala) projects are centrally funded whereas the wheat project (Tunisia) is supported by the Africa Bureau. The proposed research activity would coordinate at least two of these projects.

All three projects have active local LDC participation in collection of data. One project specifically has the regional LDC nutrition institute (INCAP) as the principal contractor. Consolidating the calorie supplementation activity for each project into one project would result in linkages between LDC researches representing similar activities in different geographic areas of the world.

5. Plans to Facilitate Utilization of Research Results

In addition to publishing pertinent data in professional journals and presenting the collected analyzed information to members of international meetings, plans will call for a workshop to be assembled at the completion of the project. The workshop will be assigned the task of analyzing the findings and conclusions of these projects regarding both calorie and amino acid supplementation. The recommendations of the workshop will be submitted to LDC governments to make use in their planning of nutrition and related sector programs. In addition, the data resulting from this project will significantly influence the course of actions of AID and other donor agencies in their development of food supplementation and agricultural programs.

6. Management Considerations

Both the wheat and corn studies are being reviewed as potential projects for building on calorie field demonstration activities. A very recent review of the corn project was conducted and a report is forth-coming regarding the amount and time at which the calorie supplementation should be started FY '76. The wheat project will be substantively reviewed jointly by the NESB Bureau and TA/N during FY '76. Any calorie supplementation projects planned for wheat will not be initiated before FY '77. This delay is in part due to the nutrition survey activities currently being conducted in Tunisia whose outcome may be of importance to the design of a calorie project.

Both projects have a cadre of trained personnel now in the field and a working relationship with the populations under study. The calorie project would be piggy-backed on the existing activities. This approach would save significant amounts of funds when compared to a project that would have to be started from scratch. In addition, a conference will be scheduled during the third to fourth year of the project. This would permit the information derived from these projects and the other studies to be presented and analyzed by experts. The conference would be another important link in the series of conferences and workshops sponsored by AID in the area of cereal fortification.

(Contractors proposals will be submitted to outside reviews and then to RAC.) Regular annual and site reviews will be scheduled to evaluate progress and to accommodate need for refined design.

AID will contract for the entire direct and associated costs of conducting the project. The host institutions share of costs in the project are "in kind" in the sense that they have capable staff, experience, facilities, space and a study population representative of the problem we are addressing.

7. Development of the Project

(1) The project will be developed through discussions between TA/N project monitor and the Harvard investigators and the INCAP investigators for the wheat and corn portions respectively. Dietary survey information and food consumption habits of the populations under study for corn and wheat are already in hand and will form the basis for the proposals. Following normal office procedures the proposals will be sent to outside reviewers and then refined and sent to RAC. Annual reviews will require invitational travel for two non-paid consultants.

(2) Scheduled PP submission is February, 1976 . The first phase to be activated is on corn.

(3) The staff time needed to develop the project will require approximately two weeks out of the average annual 30 days needed to monitor the project.

II Financial Requirements and Plans

A three year budget approximation is tabulated below for each field project:

<u>Item</u>	<u>Corn Project</u>	<u>Wheat Project</u>
Salaries	\$157,000	\$210,000
Transportation and Travel	3,000	5,000
Supplies and Equipment	45,000	65,000
Common Services	29,000	- -
Other Direct Costs	51,000	70,000
	<hr/>	<hr/>
Total	285,000	\$350,000

FY 76 funding is \$200,000 and will cover the initial 24 months activities under the Corn Project.

FY 77 funding is \$320,000 and will cover the initial 24 months activities under the Wheat project plus the third year funding of the Corn project.

BEST AVAILABLE COPY CONTRACT/GRANT REVIEW SHEET

Allottee (AID Bureau or Office) TECHNICAL ASSISTANCE BUREAU/OFFICE OF NUTRITION

Project Title and Number Protein Calorie Intervention -931-0625

Name of Bureau/Office Project Manager responsible for this contract/grant. H. L. Rice When was PM assigned this responsibility?

Contractor/Grantee Name Institution of Nutrition of Central America & Panama Number AID/5570-0132 Term FY 76 to FY 78 (Phase I) Cumulative Dollar Funding \$ 650,000

Was more than one contractor considered prior to original award? No If not, describe justification for non-competitive procurement. Unsolicited research proposed from the most experienced, capable institution (international agency). Research Advisory Committee approved project.

Does Contractor/Grantee receive its funding principally from AID? No (30%) Would the organization continue to function as it does now if AID funding were withdrawn? Yes - There are several separate AID projects. Are former AID employees now engaged by the Contractor/Grantee? No If so, how many and what positions do they occupy?

Original Purpose (brief statement on project, its originally planned duration and then estimated total cost.) To determine the effect of increased protein, calories and the combination on level of village malnutrition.

Summary Progress to Date - Is Contractor/Grantee on target? Yes Describe problems, etc., if not.

Reports - Has AID received Contractor/Grantee progress and/or substantive reports in a timely manner? Yes Has AID or other intended beneficiaries made use of the product of the Contractor/Grantee? N/A How? It is too early for results.

Contract Evaluations - Summary of any written evaluations by AID of performance, the dates of the evaluations and who made the evaluations. 1st evaluation due in FY 77 July.

Estimated final completion date of Contract/Grant FY 81 (Phase II)

Current action pending in SER/CM per PIO/T # N/A Dated In the amount of \$

Summary of Bureau/Office recommendations regarding contract/grant - (go ahead with pending negotiation request; no action necessary on existing contract/grant; initiate discussions with GC and Contracting Office re termination of contract/grant; permit contract/grant to expire on scheduled termination date, etc.)

N/A

PAC approval is required prior to initiation of phase II (evaluation FY78-E1) of this project. Phase II will cost an additional \$1,200,000 - FY77 obligation is planned.

Date June 14, 1977

[Signature]

Report Control Symbol U-1423/1

CONTRACTOR PERFORMANCE EVALUATION REPORT

PERIOD COVERED
FROM: 6/30/76 TO: 12/30/76

TYPE OF REPORT
 INITIAL
 ANNUAL
 FINAL

INSTRUCTIONS:

A. PROJECT MANAGER: Complete original and three copies; detach two copies and make appropriate distribution in accordance with M.O. 1423.9.

B. CONTRACTING OFFICER: Review and sign form; retain copy for Contract File; forward original to CM/SB, A.I.D./W.

A. GENERAL INFORMATION

1. NAME OF CONTRACTOR <i>Am. American Health Organization</i>	2. CONTRACT NO./TASK ORDER NO. <i>TA-C-1342</i>	3. CONTRACT DURATION <i>1 yr 6 mths</i>	4. CONTRACT AMT. (CUM.) <i>656,000</i>
5. PROJECT TITLE <i>Latin Calves Supplement</i>	6. PROJECT NO. <i>19317-500</i>	7. COUNTRY <i>USA</i>	

B. CONTRACTOR PERFORMANCE RATING

1. EVALUATION FACTORS	CHECK, IF SIGNIFICANT	PERFORMANCE AGAINST PLAN (-)			
		NA	NEG.	AS PLANNED	BETTER
a. Understanding project purpose					
b. Planning to achieve purpose					
c. Staff of proper size					
d. Timely arrival of personnel					
e. Technical qualifications of personnel					
f. Responsiveness to A.I.D. Directions					
g. Adherence to scope of work					
h. Adherence to work schedule					
i. Contractor's home office support					
j. Relations with cooperating country nationals					
k. Local staff training and utilization					
l. Effective administration of participants					
m. Management of commodities					
n. Timely submission of required reports					
o. Content and usefulness of required reports					
p. Other (specify)					

2. OVERALL EVALUATION		UNSATISFACTORY		SATISFACTORY			OUTSTANDING	
	(*) Check one →	1	2	3	4	5	6	7

3. If any factor is rated "negative" or if overall rating is unsatisfactory, describe underlying circumstances. Use additional sheets, if necessary.

It is too early to evaluate the contractor performance

C. SIGNATURES

1. PROJECT MANAGER	2. CONTRACTING OFFICER
TYPED NAME	TYPED NAME
SIGNATURE <i>Donald S. Rice</i>	SIGNATURE

' COST REIMBURSEMENT TYPE CONTRACT

9310625-6
 PD-AFF-231
 363

AGENCY FOR INTERNATIONAL DEVELOPMENT
 NEGOTIATED CONTRACT NO. AID/TA-C-1342

CONTRACT TYPE
 Cost Reimbursement

NEGOTIATED PURSUANT TO THE FOREIGN ASSISTANCE ACT OF 1951, AS AMENDED, AND EXECUTIVE ORDER 11223 (See Article V - \$650,000)

CONTRACT FOR: Project No. 931-17-560-625-73

PROTEIN CALORIE INTERVENTION

ISSUING OFFICE (Name and Address)

Agency for International Development
 Office of Contract Management
 Central Operations Division
 Washington, D.C. 20523

CONTRACTOR (Name and Address)

Pan American Health Organization

NAME
 525 - 23rd Street, N.W.

STREET ADDRESS
 Washington, D.C. 20037

CITY, STATE AND ZIP CODE

ADMINISTRATION BY

Same As Issuing Office

COGNIZANT SCIENTIFIC/TECHNICAL OFFICE

Technical Assistance - Nutrition
 TA/N, Dr. Kahn

MAIL VOUCHERS (Original & 3 copies)

TO Agency for International Development
 Office of Financial Management
 Washington, D.C. 20523

ACCOUNTING AND APPROPRIATION DATA

PIO/T NO. 931-17-560-625-73-3157584

APPROPRIATION NO. 72-111023

ALLOTMENT NO. 402-31-029-00-12-91

EFFECTIVE DATE 6-30-76

ESTIMATED COMPLETION DATE 12-31-77

TYPES OF BUSINESS (CHECK APPROPRIATE BOX(ES)) Non Profit International Organization

<input type="checkbox"/>	SOLE PROPRIETORSHIP	<input type="checkbox"/>	SMALL BUSINESS
<input type="checkbox"/>	PARTNERSHIP	<input type="checkbox"/>	LABOR SURPLUS AREA
<input type="checkbox"/>	JOINT VENTURE		
<input type="checkbox"/>	CORPORATION, INCORPORATED IN THE STATE OF		

The United States of America, hereinafter called the Government, represented by the Contracting Officer executing this contract, and the Contractor agree that the Contractor shall perform all the services set forth in the attached Schedule, for the consideration stated therein. The rights and obligations of the parties to this contract shall be subject to and governed by the Schedule and the General Provisions. To the extent of any inconsistency between the Schedule or the General Provisions and any specifications or other provisions which are made a part of this contract, by reference or otherwise, the Schedule and the General Provisions shall control. To the extent of any inconsistency between the Schedule and the General Provisions, the Schedule shall control.

This Contract consists of this Cover Page, the Schedule of 10 Pages, including the Table of Contents and the General Provisions (Form AID 1420-41A, dated 7-1-75)

NAME OF CONTRACTOR	UNITED STATES OF AMERICA AGENCY FOR INTERNATIONAL DEVELOPMENT
PAN AMERICAN HEALTH ORGANIZATION	
BY (Signature of authorized individual)	BY (Signature of Contracting Officer)
<i>William E. Muldon</i>	<i>Morton Darwin</i>
TYPED OR PRINTED NAME	TYPED OR PRINTED NAME
WILLIAM E. MULDON	Morton Darwin
TITLE	CONTRACTING OFFICER
CHIEF OF ADMINISTRATION	
DATE	DATE
30 June 1976	JUN 30 1976

CERTIFIED A TRUE COPY THIS
 30th DAY OF June 1976
 BY *R.E. Muldon*

BEST AVAILABLE COPY

SCHEDULE
COST REIMBURSEMENT TYPE CONTRACT

TABLE OF CONTENTS

SCHEDULE

The Schedule, on pages 1 through 10, consists of this Table of Contents and the following Articles:

ARTICLE I	STATEMENT OF WORK
ARTICLE II	TECHNICAL DIRECTIONS
ARTICLE III	KEY PERSONNEL
ARTICLE IV	PERIOD OF CONTRACT
ARTICLE V	ESTIMATED COST
ARTICLE VI	BUDGET
ARTICLE VII	PERSONNEL COMPENSATION
ARTICLE VIII	PROTECTION OF THE INDIVIDUAL AS A RESEARCH SUBJECT
ARTICLE IX	ALTERATION TO CONTRACT
ARTICLE X	ADDITIONAL GENERAL PROVISIONS
ARTICLE XI	SPECIAL PROVISIONS

GENERAL PROVISIONS

The General Provisions applicable to this contract consist of form AID 1420-41C entitled "General Provisions - Cost Reimbursement Type Contract," dated 7-1-75, which includes provisions 1 through 43; and form AID 1420-41D entitled "Additional General Provisions - Cost Reimbursement Type Contract," dated 7-1-75, which includes provisions 1 through 15.

SCHEDULE

ARTICLE I - STATEMENT OF WORK

For a period as hereinafter set forth in the Schedule, the Contractor thru its Institute for Nutrition of Central America and Panama (INCAP) shall make available and employ its facilities and personnel directed to this research project entitled "Effect of Protein - Calorie Interventions on Human Growth Retardation and Mortality Rates".

A. There are three phases of operation in the proposed investigation:

Phase I -

- a. Intervention decision research.
- b. Identification and selection of study villages.
- c. Implementation of medical care, and data collections system and
- d. Selection of food processing technology.

Phase II -

Implementation of the nutritional interventions and measurement of its effects.

Phase III -

Final analysis and publication of results

The scope of this contract is confined to Phase I only. Implementation of Phase II will be subject to prior approval of A.I.D.

B. Scope of Work

The Contractor shall perform necessary research in accordance with its solicited proposal dated March 1976, incorporated herein by reference and as specifically set forth in Clause 8, pages 12-15 and the Work Plan as set forth in pages 30-32.

Between the fifteenth and eighteenth month a review of the progress will be conducted by an outside committee including members of RAC, if they desire, for the purpose of recommending a future course of action. During the review, the design of Phase II will be approved, modified or rejected by the committee and the action of the committee will be submitted to the RAC. Funds to travel to the review are included in the consultant item of the budget. Reviewers are to be proposed by TA/N and concurred by INCAP.

C. Reports

Annual reports in twenty copies, prepared in accordance with the "Guidelines for Preparation of the Research Annual Report", attachment #4, shall be submitted to AID/W, TA/N, within thirty (30) days of the anniversary date of this contract.

One copy of all original data or punch cards and tapes, and of all necessary accession instructions are the property of AID to be made available within 60 days of AID's written request.

ARTICLE II - TECHNICAL DIRECTIONS

Performance of the work hereunder shall be subject to the technical directions of the cognizant A.I.D. Scientific/Technical Office indicated on the Cover Page. As used herein, "Technical Directions" are directions to the Contractor which fill in details, suggest possible lines of inquiry, or, otherwise complete the general scope of the work. "Technical Directions" must be within the terms of this contract and shall not change or modify them in any way.

ARTICLE III - KEY PERSONNEL

A. The key personnel which the Contractor shall furnish for the performance of this Contract are as follows:

Dr. Robert Klein - Project leader

Dr. Ricardo Bressani - Project leader

B. The personnel specified above are considered to be essential to the work being performed hereunder. Prior to diverting the specified individual to other programs, the Contractor shall notify the Contracting Officer reasonably in advance and shall submit justification (including proposed substitutions) in sufficient detail to permit evaluation of the impact on the program. No diversion shall be made by the Contractor without the written consent of the Contracting Officer; provided, that the Contracting Officer may ratify in writing such diversion and such ratification shall constitute the consent of the Contracting Officer required by this clause. The listing of key personnel may, with the consent of the contracting parties, be amended from time to time during the course of the contract to either add or delete personnel, as appropriate.

ARTICLE IV - PERIOD OF CONTRACT

The effective date of this Contract is 6-30-76. Phase I of the project has an estimated completion date of 12-29-77.

ARTICLE V - TOTAL ESTIMATED COST AND OBLIGATED FUNDS

A. The total estimated cost of this contract to the U.S. Government is \$650,000.

B. Funds in the amount of \$613,000 are hereby obligated. The balance of \$37,000 is subject to the availability of funds in accordance with General Provision No. 8 (Attachment No. 3) entitled "Limitation of Funds."

ARTICLE VI - BUDGET

The following sets forth the budget for the entire contract, and for the initially funded increment. The contractor may adjust individual line items as necessary, without exceeding the funded total.

	<u>BUDGET</u>	FR: 6-30-76 <u>TO: 12-29-77</u>
1. Salaries and Wages		\$239,500
2. Consultants		7,500
3. Travel and Transportation		37,500
4. Other Direct Costs		115,000
5. Equipment, materials & supplies		122,000
6. Publications		4,500
7. Computer		25,000
8. Apportioned Research Expense		<u>99,000</u>
Total		\$650,000

Partial funding for food supplements has been included, however, expenditures will be subject to prior AID approval as stipulated in Article IA.