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FROM - RIO DE JANEIRO

DATE 6/8/72

SUBJECT - REVISED NONCAPITAL PROJECT PAPER (PROP) FOR PROJECT 512-15-253-286, PROTEIN FOODS AND FOOD FORTIFICATION

REFERENCE - TOAID A-195

As a result of discussions on this project in Washington, there are enclosed 7 pages to replace those of similar numbers in the original submission. Also enclosed is logical framework, as suggested.

OHMANS

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Enclosures:
7 revised pages (2, 3, 4, 5, 8, 9 and 10)
Logical framework

Att to LA 6-14-72

PAGE 1 OF 1

DRAFTED BY	OFFICE	PHONE NO.	DATE	APPROVED BY:
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I. Program or Sector Goal: The broader objective to which this project contribute

To improve the diet of the majority of the Brazilian people to within acceptable nutritional levels, thus contributing to improvement of their health and productivity.

Measures of Goal Achievement:

1. Fortified commodities and other protein foods available on the national market at reasonable cost.

2. Genetically-improved, high-protein staples being grown and consumed by farm families.

3. Increased consumption of protein by persons both within and outside the market system.

4. Framework of integrated nutrition policy visible and effective at state and federal levels.

Assumptions for Achieving Goal Targets:

1. Stable Brazilian political scene with continued GOB concern with improvement of human resources and the quality of life.

2. GOB recognition that malnutrition is a significant factor inhibiting overall development.

3. The National Food Commission will continue its close working relationship with USAID.

4. Improved coordination among ministries involved in nutrition-related activities.

5. The federal government will be motivated by achievements of nutrition programs at the state level to formulate a national nutrition policy.

II. Project Purpose:

To promote increased consumption of protein foods.

Conditions that will indicate purpose has been achieved: End of Project Status:

1. Increased protein availability
   a. Fortified mandioca flour on market.
   b. PTC produced industrially and in use.

c. The planting and consumption of Opaque-2 corn in certain rural areas and spreading to others.

d. Industry will have designed and marketed additional low-cost protein foods.

e. State and Federal Governments will purchase protein-rich foods, providing base market.

f. GOB will provide incentives for the development and sale of additional protein foods.

2. Increased consumption of protein foods.

a. Consumption patterns will show increased ingestion of protein.

b. Mass media will be increasingly used to promote protein-food consumption.

c. Government mass feeding programs will emphasize protein foods.

d. Nutrition education materials will be published and available to general public as well as in use in school systems.

e. Coordinated nutrition training courses will be given for the benefit of school teachers and supervisors, rural extension and health personnel.

3. Incorporation of nutrition considerations in development planning.

a. Policies formulated on food and nutrition within development plans of state and federal governments.

b. Line items for promotion and consumption of protein foods will be included in (state and federal) budgets.

c. Government officials will have been trained in relationship between nutrition and planning.

d. Ongoing training in nutrition and planning will take place in Brazil.

e. Completed major systems study will outline steps for continued government action in raising the protein-consumption level of Brazilians.

Assumptions for Achieving Purpose:

1. State and Federal governments will give increasing support to related projects in areas of school feeding, health improvement, education, agricultural research, science and technology.

2. Fortificants can be developed at relatively low-cost.

3. Protein-rich foods can be sold at prices reasonably competitive with non-enriched foods.

4. Study will be carried out with the close cooperation of the GOB.

III. Outputs

1. Increase protein availability by demonstrating in certain key products the viability of improving the protein level of staples, developing low-cost fortificants and protein foods, and promoting utilization of genetically-improved commodities.

a. Commercial distribution of fortified mandioca.
b. Functioning pilot FFC facilities, trained people operating them.
c. Opaque-2 Corn demonstration project in the State of Minas Gerais.
d. Research and marketing staffs of food industry trained in designing and marketing of protein foods.

2. Promote increased consumption of protein foods.

a. Major food industries aware of potential of mass media techniques for promoting protein foods.

b. Promotion of protein food utilization through contacts by project staff and FFC project managers with heads of mass feeding programs. Training for key officials.

c. Publication of nutrition education materials will be stimulated in coordination with USAID-assisted Education projects and thru AKA.

d. Training in nutrition education for key Education and Extension service officials. TA by project staff.

3. Promote the incorporation of nutrition considerations in development planning.

a. Integrated state and federal nutrition plans.

b. Ongoing program established in nutrition programming at Ribeirão Prêto and/or other institution.

c. Systems study of approaches to combatting malnutrition.

Magnitude of Outputs:

1a. FY 73 - Rio area
74 - São Paulo and South
and 74 - Northeast

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b. FY 74 Pilot plant in operation Att. to TOAID A-
74 Final process developed
75 Semi-industrial plant under construction or in planning stage.
4 Technicians trained in production techniques.

c. From original 50 families starting project, increase to 250 families growing crop in 2-3 geog. distinct areas of Minas

d. 40 people trained in 2 seminars in São Paulo and NE.

2a. Contacts with major industries made by S.T. advisors.

b. Ongoing contacts. Training thru FFD projects.

c. Ongoing contacts. Nutrition education evaluation in Brazil sponsored by AID/W.

d. 8 trained in integrated nutrition education courses.

3a. FY 75 São Paulo
74 Other states (possibly Alagoas and Ceará)
75 Federal level

b. 74 Program established in Ribeirão Prêto
End 74 - 15 trained.
End 75 - 20 more trained.
75 - Program established at 2nd school
5 people trained at Cornell (or similar institution).

c. 500 pages.

Assumptions for Achieving Outputs:

1. GOB will provide incentives such as tax relief or direct subsidies for fortification of mandioca flour on national scale.

2. Processing facilities for fortification of foods in NE and N of Brazil will be developed.

3. Advantages of utilization of genetically-improved crops such as Opaque-2 corn will be so evident that state governments will adopt such programs.

4. Design and marketing techniques acquired by industry in São Paulo will be reproduced in other areas.

5. Returning Brazilians will train other participants in their respective areas.

6. Positive results of integrated nutrition programs in key states will have multiplier effect on federal and other state governments.

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INPUT ASSUMPTIONS

1. USAID will be able to find and contract the number and quality of US technicians needed for implementation of project activities.

2. AID/W, recognizing the innovative nature of this project, will not delay approval of requests for procurement and technical service waivers.

3. AID/W, TA/N inputs will be made available to the project, as previously discussed.

RATIONALE ATT. TO TOAID A-

Brazil's overall development in the past 6 - 8 years has been classified as an "economic miracle", but unfortunately the great majority of the population do not share in its benefits. President Emílio Garrastazú Médici admitted very frankly in a speech not long ago that "the Government is doing well but the people are doing badly".

The head of the Agricultural Sector of the Ministry of Planning, Dr. Maufício Reis, declared recently that the preliminary results of a demographic survey which also showed distribution of income and nutritional levels "indicate such widespread malnutrition that the Government, right up to the President, is quite worried and anxious to take measures to alleviate the problem". (1)

The biological impact of malnutrition has been recognized for many years, especially its devastating effect on the most vulnerable mother and child sector as well as on the economically deprived and on the productively important wage-earner and food-producer. This impairment of mental as well as physical development leads to a broad range of economic consequences. The active participation of the great masses of urban and rural populations who are marginal to the development process cannot be readily achieved unless there is a healthy, well-fed, dynamic and productive population. Nutritional deficiencies and poor health, with their corollaries of absenteeism from work and school, low productivity, short life expectancy, inability to absorb new technologies, indifference and apathy, must be overcome if Brazil is to emerge fully from its status of underdevelopment.

The mass migration of rural populations to the cities has given rise to new problems, including nutritional. In the desire to reap the benefits of the industrial boom, a major consideration has been overlooked: Farmers moving to cities in search of new employment opportunities in industry are neither physically nor technically equipped. They soon join the ranks of the unemployed, the under-employed, or at best the minimum wage-earners. In the newly created slums where they must live, the golden dream vanishes and their misery becomes all the more dramatic. Although they produced little as farmers, under these new circumstances they produce nothing at all, or practically nothing, because they lack the requisite training and skills. Living in deplorable economic conditions, they add their marginality to urban problems. The diet of this new social class, which used to consist of 2 or 3 staple foods produced by the families themselves, has in the urban environment become even more deficient due to ignorance of good nutritional habits as well as lack of cash for food purchase. On marginal incomes they buy (1) what is most familiar to them and (2) what seems to be cheapest and most filling for the money. Mandioca flour is frequently the basic commodity selected.

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2. As previously mentioned, an excellent fortificant nutritionally for manioca as well as for other foods would be fish protein concentrate (FPC). As an animal protein it contains methionine which is lacking in the soy protein isolate currently being considered as the manioca fortificant (as well as in the Brazilian diet in general). Reports by USAID-sponsored consultants have indicated that Brazil's process for the production of a high-quality yet inexpensive FPC appears to be feasible. Equipment for a pilot plant has already been purchased by the Marine Research Institute and USAID will provide the technical assistance for its installation, testing and the optimal experiments and process development which will subsequently be required.

The economic viability of Brazil's FPC process is based on the utilization of a cheap and abundant fatty fish and on also cheap and abundant sugar-cane alcohol as solvent, and then on the commercialization of the oil extracted (which becomes the prime product with the FPC a secondary product). A need for technical assistance on oil homogenization as well as a marketing study on oil consumption are both anticipated. A feasibility study concerning the need for an intermediary semi-industrial plant will also be required after the laboratory phase is completed and the scale of the commercial market is established. The training of competent technicians for the Marine Research Institute as well as for other states is also an important input.

The above Brazilian project, if successful, will be the first in the world [illegible] which is appropriate for other developing countries which [illegible] and have a good supply of cheap fish. For this reason [illegible] is being observed by many other nations, especially since the utilization [illegible] in a wide array of foods is technically and economically [illegible].

[illegible] of the Brazilian population of some 93 million are not [illegible] commercial marketing system and therefore would not benefit [illegible] fortification of foods which require processing. The only way to in[illegible] families outside commercial channels is by genetic [illegible] foods they grow. One agricultural breakthrough in Brazil [illegible] nutritional implications has been the successful production of [illegible] (high-lysine) corn seed. However, in Brazil as in the rest [illegible] very limited use of this corn by subsistence farmers has been [illegible]. Brazil is in a peculiarly favorable position to work on increasing [illegible] of Opaque-2 corn. It has, in addition to a top-level team of [illegible] specialists from Purdue University (where Opaque-2 corn was [illegible] at the Rural University in Vicosa in the state of Minas Ge-[illegible] extensive leadership in Opaque-2 seed production of the Agroceres [illegible]. The Opaque-2 corn project also has the enthusiastic support and [illegible] of the state's Rural Extension Service, and the great interest of [illegible] dynamic State Secretary of Agriculture. An initial effort is under way, [illegible] with 50 farmers, to evaluate the variables necessary for a valid project and [illegible] what the principal problems will be. During FY 73 a demonstration project [illegible] is planned in which USAID through its Nutrition and Rural Development offices [illegible] will participate to a limited extent, as liaison for AID/W, TA/H, whose [illegible] again is for world-wide benefits.