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AGENCY FOR INTERNATIONAL DEVELOPMENT  
Washington, D.C. 20523

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OFFICE OF THE AUDITOR GENERAL  
AREA AUDITOR GENERAL - LATIN AMERICA

AUDIT REPORT  
USAID/BRAZIL  
PROTEIN FOODS AND FOOD FORTIFICATION  
PROJECT NO. 512-15-233-288

For the period April 22, 1971  
through September 30, 1974

Audit Report No. 1-512-75-27  
October 31, 1974

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## INTRODUCTION

Malnutrition is widespread in Brazil, affecting an estimated 60 million people with reduced resistance to disease and diminished labor productivity as well as impeding mental and physical development. In response to the Government of Brazil's (GOB) growing recognition of the problem, the USAID and the GOB entered into a Project Agreement (ProAg) on April 22, 1971. The project was, in brief, dedicated to (i) increasing the availability of protein through food fortification; (ii) increasing the consumption of protein through nutrition education; and (iii) encouraging GOB entities to include nutrition considerations in policies and planning.

Toward these goals, the USAID agreed to provide consultants, training and limited amounts of research materials and equipment. Also, the USAID agreed to encourage the use of protein and/or fortified foods in feeding programs, to promote their use by the general public, and to provide assistance in developing closer cooperation between nutritionally oriented private and public entities in the U.S. and Brazil.

The Ministry of Health (MOH), initially through the National Food Commission and subsequently through the National Institute for Nutrition and Feeding (INAN), agreed to assume the responsibility for supervision and coordination of the various sub-projects and to provide certain technical, administrative and financial support as required. The various sub-projects were concerned either with the development of fortificants or the fortification of foods. After some or all of these products were in production, an economic analysis was to be performed to determine their efficacy in combating malnutrition.

The primary purpose of our examination was to determine the degree of attainment of the project's objectives, the effectiveness of planning, implementation and the utilization of resources. Other purposes were to evaluate the effectiveness of financial and administrative management of the project and the degree of compliance with A.I.D. policies, regulations, and procedures.

## SUMMARY

In brief, this project can claim little in the way of tangible results that have contributed measurably to an increase in either the availability or consumption of protein. However, and perhaps most important, the USAID has contributed to an increased GOB awareness of the national consequences of malnutrition and to the promise of increased GOB priority to be given to seeking solutions to the basic problems.

Most projects concerned with the use or development of food fortificants have not yet been developed to the point of widespread use in combating malnutrition (see pp.2 and 3).

One GOB agency lacked sufficient motivation to utilize a grant of lysine and blending machines within the planned time frame. A recently developed plan by the cooperating agency to use these will bear close monitoring by the USAID and we have recommended such action (see pp.3 and 4).

The establishment of a new GOB institute, INAN, to combat malnutrition may yet result in a successful achievement of the objective of focusing increased GOB attention on the problem. However, not much in the way of objective accomplishment has yet been achieved. Sufficient technology now exists: what is needed is a sufficient GOB priority to effectively implement programs (see pp. 4).

A reorganization of INAN and a possible loan from the World Bank justifies the additional, and final year of authorized USAID assistance, but should be limited to well defined transitional activity. We have recommended that, with one exception, no further Project Implementation Orders (PIO's) be issued until a clearly defined ProAg is signed. (See pp. 5 and 6).

Other conditions noted were the absence of joint USAID/MOH evaluations (see pp. 6) and past inadequate utilization of equipment (see pp. 7 and 8).

#### FINDINGS AND RECOMMENDATIONS

##### Implementation Progress

The plan of action to implement this project consisted of four major areas of activity:

- Increasing the availability of protein.
- Increasing the consumption of protein.
- Promoting the incorporation of nutritional considerations in developmental planning.
- A systems analysis to evaluate the contribution of nutrition related initiatives toward combating malnutrition.

A systems analysis has not been performed since no activity to increase availability or consumption of protein has yet realized a sufficient degree of success to permit evaluation. A brief description of the various sub-projects follows.

The sub-project to fortify the protein deficient manioc flour resulted in the development of a process to increase the protein content by the addition of a soya bean product. However, the international and domestic price increase of soya bean has rendered the product too costly without official subsidization, a matter currently under GOB consideration. There exists a probability that Fish Protein Concentrate (FPC) may be substituted, so there is yet hope that the most common staple of the target group may be fortified in the future.

A process to extract FPC from unusable sardine parts and pieces has been determined to be viable as the result of a pilot plant developed by the Marine Research Institute. However, before any impact can be made on the consumer, the facility for a larger volume of production must be developed. Additional machinery for expanded research has been donated by the U.S. National Marine Fishery Service and is in the process of being shipped, but "scale-up" problems will need resolution. Consultants to deal with these and other technical problems are to arrive in the near future.

A grant of machinery to provide for the increased production of Solein (a soya-based milk substitute) has not yielded any appreciable results. The potential production capacity has not been utilized for two reasons. Foremost, the price of the product is beyond the capacity of the ordinary consumer to pay primarily because of the present high cost of soya beans combined with the low volume of production. Second, the GOB institution that was going to use Solein in its feeding programs has not yet placed an order, part of which would be 3% above cost price in accordance with the terms of the agreement that provided the machinery.

With further regard to the Solein and to the desire to expand pre-school feeding programs, the USAID informed us that the MOH Maternal/Child Health program now has funds and has signed agreements with the State Secretariats of Health to include supplemental feeding. It is hoped that Solein will be among the locally produced foods to be purchased.

In its comments on the draft audit report, the USAID agreed that there had not yet been much impact on the institutional market, but desired to have noted the fact that commercial sale of Solein has commenced with reported good acceptance. However, we would like to point out that the group suffering most from protein deprivation will not be able to afford the purchase of Solein.

A sub-project to develop torula, an easily produced yeast with a high protein content made on the sub-strata of sugar cane waste is dormant because of the lack of interest of the Institute of Sugar and Alcohol which owns the production plants.

The USAID's attempt to help promote the utilization of the high protein Opaque 2 corn by subsistence farmers has met with some success. However, the resistance of the corn plant to weevil and moth infestation will need to be improved to help insure its universal acceptance among the farmers who are to be the beneficiaries by virtue of the increased protein in their diet.

A sub-project granting about \$41,500 worth of lysine and blending machines to be used with PL 480 wheat flour donated to the National School Lunch Program (CNAE) has had few positive results. A two-year supply of lysine remains only half used after about two-and-one-half years. In some locations the lysine has not been used at all or used only slightly. In Manaus, the blending machine was not installed when inspected about a year after its delivery. Apparently, some of the management personnel of the CNAE were not sufficiently motivated to use the fortificant that would increase the protein intake of the school children.

During an early phase of this audit, after a discussion with a CNAE official, there appeared to be uncertainty on the part of CNAE as to what was to be done with the remaining lysine and the blending machines. We discussed the situation with USAID personnel and developed a recommendation that the USAID should request of the MOH a firm plan for use of the lysine and the machines and place a refund claim for that portion which was not usable or would not be used. Before the completion of the audit report draft, the USAID had contacted CNAE officials who in turn developed an acceptable plan for utilization of the machines and lysine using wheat flour of the World Food Program and PL 480 along with domestic purchases. Because of this prompt action the recommendation was deleted from this report. However, because of the history of this sub-project, we believe that the USAID should satisfy itself that the new plan is implemented and determine if there is cause for making a refund claim for any unusable commodities.

#### Recommendation No. 1

That the USAID satisfy itself that CNAE implements the October 1974 plan for utilizing the lysine and the machines, and determine whether or not there is cause for making a refund claim for any unusable commodities.

There are three programs of consumer education oriented toward better nutrition. These are conducted by Brazilian entities, but unless and until an economical, high-protein staple commodity is available, there is little likelihood that a significant number of the people in the project target group will be able to increase the protein content of their diets.

The objective of having nutrition needs considered in developmental planning appears to have the greatest potential of being realized. However, objective accomplishment yet remains to be demonstrated. The USAID became very optimistic in late 1972 when the creation of INAN was announced. However, it was mid-1973 before the organization took shape and began to commence activity. Unfortunately, the initial leader of INAN was removed from office in mid-1974 amidst allegations of improper management. Consequently, INAN must commence again with the additional burden of overcoming the recent negative publicity.

Most significant is the fact that INAN was created, indicating an intent to give the nutrition factor increased federal attention and an apparent higher priority than previously accorded. What is still needed is a solid demonstration, through some activity or activities with adequate funding, of priority being given to nutritional considerations in national planning and policy. The USAID has informed us that some funds are now available, but utilization of such has yet to commence. The USAID is also hopeful in this regard due to the anticipated consideration by the World Bank of a \$50 million loan request by the GOB to finance activities to fight malnutrition.

To sum up, none of the project or sub-project activities have resulted in a significant increase in protein availability or consumption that has been or could be evaluated. What appears to have been lacking was the GOB recognition of the nutrition problems and sufficient motivation to effectively combat them. On the positive side, the creation of INAN appears to exemplify the requisite recognition and the USAID feels justified in claiming some credit for this as a result of its efforts.

### Current Status

The financial status of the project as of September 30, 1974 was as follows:

	(000's) <u>Obligated</u>	(000's) <u>Disbursed</u>
Direct - AID	\$ 39	\$ 39
PASA <u>1/</u>	2	2
Contracts	180	134
Participants	119	69
Commodities	114	91
Other - Direct	<u>11</u>	<u>11</u>
Totals	\$465 =====	\$346 =====

1/ Participating Agency Service Agreement.

The above figures do not include the most recent unobligated allocation of \$100,000 approved for a transitional and final year of A.I.D. funding through June 30, 1975. However, this is not yet supported by a ProAg. The most recent ProAg expired June 30, 1974, but because the president of INAN at that time was temporary, the USAID waited for the appointment of a permanent official with whom it could negotiate. Such occurred on September 5, 1974, and there has since been at least one meeting between the new president and USAID personnel. Additional meetings are scheduled in the near future.

The USAID's current effort is to be directed toward providing linkages between its past assistance and that which may be provided for through the World Bank loan. In our opinion, this planned effort has merit. The technology exists for increasing the protein consumption of the target group, but the implementation of projects on a sufficiently large scale is beyond the scope and financial ability of this project. To be effective, the initiative must now come from the GOB. The most recent project funding serves to sustain the USAID's hope that the new INAN leadership and the potential loan will bring about the implementation of effective and large scale programs.

However, we believe that unless the GOB demonstrates due diligence in pursuing the loan from the World Bank or in developing and implementing effective nutrition programs, the USAID should discontinue assistance to this effort. The first important demonstration would be a ProAg that is concrete and specific in what the GOB requires of the USAID in this transition stage. Furthermore, we see no merit in the authorization of any new PIO's until such a ProAg is signed except for providing INAN assistance in the formulation of a work plan. The "shotgun" approach of the past may have been appropriate in the circumstances, but the time has arrived for the single purpose approach of transferring total responsibility to the GOB and responding only to their initiative.

#### Recommendation No. 2

That the USAID, with the exception of providing a consultant to INAN to assist in the formulation of a work plan, issue no further PIO's for this project until a ProAg has been signed that specifically describes the input requested of the USAID which should be oriented to transitional activity.

#### General

##### Joint Evaluations

The ProAg provides that prior to the end of each fiscal year, the MOH and the USAID would jointly evaluate the project. Ostensibly this was for the purpose of determining whether or not to continue the project. No such evaluation has been made. As a consequence, the opportunity was lost to focus MOH attention on the overall progress toward the ultimate goal of combating malnutrition. The need for this "focus of attention" is implicit in every phase of the project, since one objective was to bring about a GOB awareness of the importance of nutrition considerations in developmental planning.

The USAID apparently took no initiative in this regard since the project manager maintained close contact with various concerned GOB officials and each sub-project generated reports relative to its activity. However, we believe that this does not constitute a joint evaluation as required by the ProAg. Because the funding for fiscal year 1975 activity has already been authorized, we have no recommendation to make at this time, but would suggest a similar such requirement be included in the next ProAg to provide both A.I.D. and the GOB with an end-of-project perspective.

### Consultants

During the course of the project, various contracts were made for short-term consulting services which for the most part were concerned with the various sub-projects. Others provided consultation to INAN relative to organizational problems, operations, and the World Bank loan application. Generally, the consultants have earned favorable comments from their GOB counterparts.

We noted in the report prepared by Transcentury Corporation for Contract No. AID 12-745 that an opinion of the consultant conforms to the intent of our Recommendation No. 2. His report concluded as follows:

"A.I.D. should provide no further consulting assistance to INAN without a clear description of the groups to receive it and the goals of the help. The description should be verified directly with the groups to be involved. Until INAN has demonstrated capability to implement . activities, further technical assistance is likely to be unproductive. The Institute needs some operating experience to review, before more consulting help can be useful".

Apparently, the consultant was frustrated by INAN's lack of clearly defined objectives and its slowness in implementing programs. This is probably due to the lack of effective leadership as discussed earlier. Since Recommendation No. 2 addresses this issue by requiring clearly defined assistance requests, we make no further recommendation in this regard.

### Participants

Fourteen participants have been selected for long and short-term training in the U.S. Four have not yet left, six are still in the U.S., and four have returned and are engaged in project related activities. Additionally, there have been local conferences and workshops, including a month-long Massachusetts Institute of Technology workshop on multi-sectoral planning.

### Commodities

Since 1971, over \$91,000 was authorized to be paid for equipment, parts, and lysine. Overall, the bulk of these purchases has not yet been well utilized nor have the purchases yet made a significant contribution to the achievement of project goals. This appears to be the consequence of a combination of overambitious planning and a lack of follow-through by various GOB entities.

Over \$55,000 was paid for an excess property spray dryer donated to the Macóca Dairy and nearly \$10,000 was paid to consultants to supervise and assist in its installation. The equipment was installed for the purpose of producing sufficient quantities of Solein that was to be ordered by a GOB agency for feeding programs. The order has not yet materialized so the equipment is being used to produce a powdered milk the company produces. The small quantity of Solein currently being produced is more economically done with other smaller machines they own. As noted earlier, the order for Solein by a GOB institution to use in a pre-school program may be made in the near future, thus justifying the grant.

Another instance of promised future utilization involves a gas chromatograph and parts, valued at nearly \$8,000, given to the Marine Research Institute for the FPC sub-project. A visit to the Institute in April 1974 disclosed that the machine was installed but not yet in use. We were informed that the phase of research and analysis requiring this machine would commence in the near future. Apparently, a change of priorities caused the deferral of the use of this equipment.

The bulk of the remainder expended for commodities was for 9 blending machines (about \$23,500) and over 7 tons of lysine (about \$18,000). As previously discussed in the coverage of the sub-project for the fortification of the PL 480 wheat flour donated to CNAE, the equipment and lysine have been poorly utilized.

## BACKGROUND AND SCOPE

### Background

The economic development Brazil has realized in the last decade has not been shared by a large number of the people. Surveys disclose that malnutrition is widespread and with it goes a broad range of economic consequences resulting from impaired mental and physical development such as short life expectancy, low productivity, absenteeism, apathy, and learning disability. When a significant portion of the population is so affected, it is certain to restrain overall national development. Some key officials in the GOB have become aware of the conditions and the consequences and are seeking ways to improve the situation.

Prior to this project, the USAID dealt with malnutrition through various discrete endeavors such as PL 480 feeding programs, nutrition education, and agricultural research. With the incipient development of the GOB awareness of the economic consequences of malnutrition, the USAID sought to develop a project that would provide a coordinated attack involving government, private industry and educators on the various phases of the problem. But first, more broad support for such a program had to be garnered within the GOB and its various ministries.

Consequently, this project was designed to expand the awareness of the GOB to the point of giving nutrition programs higher priority and developing coordinated plans and policies to achieve the two other prime elements of the project, i.e., to increase protein consumption by the populace and to increase the availability of protein for consumption.

In this instance the MOH, a relatively new ministry and therefore one with less prestige, is charged with the responsibility of fighting malnutrition. INAN, an agency of the MOH, was created to provide the necessary leadership and expertise for coordinated national policy and planning. A very significant portion of the USAID's assistance was planned to be directed to nurturing the new ministry, the fledgling agency, and the relatively new concept of a coordinated, multi-pronged attack on malnutrition.

#### Scope

The Brazil Residency of the Area Auditor General, Latin America, has performed an examination of USAID/Brazil Project No. 512-15-233-288, Protein Foods and Food Fortification. This was the first such examination and covered the period from April 22, 1971 through September 30, 1974. The audit was performed intermittently during the period from March 27, 1974 through October 8, 1974.

Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the financial records and project related documents, inspections and discussions as were considered necessary in the circumstances. Site visits were made to the Marine Research Institute in Rio de Janeiro, the office of the CNAE in Brasilia, and the Macóca Dairy in the State of São Paulo.

Before issuance, this report was reviewed with appropriate USAID officials and their comments were given due consideration.

EXHIBIT A

Distribution of Report

Mr. Marvin Weissman, Mission Director, USAID/Brazil ..... 6

State Department - Inspector General of Foreign  
Assistance (IGA) ..... 1

State Department - Country Director - Office of  
Brazil Affairs (ARA-LA/BR) ..... 1

AID/W - Executive Director (ARA-LA/MGT/EX) ..... 1

AID/W - Office of Program Operations (LA/OPNS) ..... 1

AID/W - Office of Audit (AG/AUD) ..... 9

AID/W - Operations Appraisal Staff (AG/OAS) ..... 1

AID/W - Office of Inspections and Investigations (AG/IIS) ..... 1

Office of the Area Auditor General, Latin America  
(AAG/LA) - Miami ..... 1

UNITED STATES GOVERNMENT

# Memorandum

UNCLASSIFIED

*MW*

Mr. M. Van Doren, CONT

DATE: September 4, 1975

Robert R. Standley, <sup>per</sup> IHFD

Utilization of Lysine for Wheat Flour Fortification  
by School Lunch Program (CNAE) - Audit Report No 1-512-75-27

Pursuant to USAID/IHFD's agreement to follow up with CNAE concerning utilization of lysine received through a USAID grant, IHFD has remained in contact with CNAE.

CNAE cooperated fully in the issue by giving us information as requested, agreeing to inspection trips by IHFD personnel, and showing the lysine on their periodic stock reports to USAID. Now we are pleased to inform you and the AAG that the lysine has been completely utilized, and none of it was lost. We consider the issue closed.

cc: WFGelabert, A/D/AID  
RMatuck, CONT

IHFD:RRStandley:datq:9/4/75

UNITED STATES GOVERNMENT

# Memorandum

✓

FS Control BR-441/75

DATE: April 18, 1975

TO : Mr. William D. Chandler, CRA/Brazil

FROM : John R. Davison, FMRD/Cont

SUBJECT: Audit Report No. 75-27, -Protein Foods and  
Food Fortification Project No. 512-333-288

In addition to information already provided under subject audit report, we are attaching further correspondence, in Portuguese with English translation, between the Mission and C.N.A.E. regarding this project.

CONT: JRDavison: sm

cc: R. Ballantyne, LA/BR, AID/W (with attachments) ✓  
LA/OPNS, AID/W (2 copies)(with attachments)

att: a/s



14 de abril de 1975

Ilma. Sra.  
Graciela Hetalina de Oliveira Gabriel  
Coordenadora Regional da C.N.A.E.  
Travessa Euzébio Barbosa, 726  
Belém, Pará - 66.000

Prezada Da. Graciela:

Ficamos muito contentes ao sermos informados que a Coordenação Regional da CNAE no Estado do Pará já tem 2.º volumes de farinha de trigo enriquecidos com lisina, à disposição das unidades escolares dessa Região.

Quanto à consulta feita por V.Sa. sobre a possibilidade de misturar lisina aos produtos CEB, CSM e WSD -- no intuito de zerar o estoque de lisina juntamente com os demais alimentos estocados nessa Coordenação -- temos a informar que entramos em contato com o Cel. Fleury a respeito e ele decidiu fazer o Setor Técnico da CNAE instruí-la sobre o assunto.

Segundo sua informação o enriquecimento da farinha de trigo está sendo feito na base de 100 gramas de lisina para cada 3 volumes de farinha de trigo.

Conforme indicação do Dr. Alceu, Chefe do Setor Técnico da CNAE, V.Sa. poderá aumentar a proporção da lisina para 0,5%, ou seja, 200 gramas de lisina para cada 3 volumes (de 22,68 kg. cada), de farinha de trigo. Queremos crer que, valendo-se dessa nova proporção, V.Sa. não terá problemas com excesso de estoque de lisina.

Outrossim, colocamo-nos à disposição de V.Sa. para toda e qualquer informação ou orientação sobre o assunto, que por ventura venha a ser necessária.

Antecipadamente agradecemos a atenção que V.Sa. dispensar ao assunto e subscrevemo-nos,

Clearances: HRStandley \_\_\_\_\_  
T. Soares \_\_\_\_\_

Atenciosamente,

cc: Cel. Fleury, CNAE  
Dr. Alceu Ramos, CNAE  
CJ Knowlan, COMT  
MVanDoren, COMT

Dick F. Apodaca  
Food for Peace Officer  
Health, Nutrition and  
Food for Development/WHN/10

Ilma. Sra.  
Graziela Natalina de Oliveira Gabriel  
Coordenadora Regional da CNAE  
Travessa Rui Barbosa, 726  
Belem, Para

Dear Mrs. Graziela:

We were pleased to be informed that the Regional Coordination of CNAE in the State of Para has already enriched 2.000 sacks of wheat flour with the lysine available for distribution to the schools in that Region.

Regarding your question about the possibility of mixing the lysine with CSB, CSM and WSB for the purpose of reducing the lysine stock, as well as the other commodities stored in that Coordination - we have contacted Cel. Fleury regarding this matter and he advised us that the Technical Sector of CNAE will instruct you about the matter.

As per your information, the enrichment of the wheat flour is being carried out on the basis of 100 grams of lysine for 3 sacks of wheat

flour.

In accordance with Dr. Alceu's indications, Chief of the Technical Sector of CNAE, you can increase the quantity of lysine to 0,5% which means + 200 grams of lysine for three sacks (22,68 kg each) of wheat flour. We believe that, with this new proportion, you won't have problems with an excess of lysine.

We will be at your disposal for whatever information or orientation may be necessary.

We thank you in anticipation for the attention given to this subject.

Cordially,

Dick F. Apodaca  
Food For Peace Officer