

KPA Proj. No. 9310247(4)

19, 1976

PD-AAC-767

87,600

190-247

ACTION MEMO

TO : AA/TA, Mr. Curtis Farrar

THRU : TA/PPU, Carl Fritz

FROM : TA/AGR, Leon F. Hesser

SUBJECT: Approval of a Task Order with the National Academy of Sciences for Nitrogen Fixation/Research and Training in Brazil.

PROBLEM

6 p.

The National Academy of Sciences (NAS) submitted a proposal in October 1975 requesting AID's support (\$87,600) for research and training on Nitrogen Fixation in Brazil (see Memo-Coleman to Farrar dated October 22, 1975 attached). The work would focus on the hitherto unknown symbiotic association between nitrogen fixing bacteria and root cells of certain tropical grasses and cereal grains. The proposed research would fill a key part of the knowledge gap on nitrogen fixation as spelled out in AID's Strategy Report on the subject and would complement other AID projects on nitrogen fixation. Time is now one of the most critical elements of the proposal for AID support. The work involves international cooperation of Brazil and other countries which has forced the NAS to provide travel expenses from other sources (originally intended to be supported by AID) for one U.S. doctoral fellow who is now in Brazil. His work is now impeded by the lack of equipment to be purchased with funds which would be provided by AID. A Task Order for this project would be an appropriate and the most expeditious means to implement the project since it is well within the parameters of the BOA as established between AID and NAS. The Task Order would involve three years of funding which the Contract Office has informed us could be drawn up. The project could alternatively be processed as a small project according to the procedures outlined in AID Handbook #3, although this would require considerably more time. This memorandum which outlines the proposed project (below) is submitted for your review and approval.

DISCUSSION

A. Background: The NAS bilateral program with Brazil began in 1965 when a group of NAS-selected U.S. scientist met in Rio de Janeiro with representatives selected by the Brazilian National Research Council (CNPq). These discussion led to a Brazil-U.S. workshop on the Contribution of Science and Technology to Develop-

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ment at Itatiaia, Brazil, April 1966. Since that time three additional workshops have been held -- February 1968, April 1969, and November 1971. In addition a number of study groups examined key problems of development and technical policies and programs designed to increase Brazilian scientific capabilities in areas relating to Brazilian national development goals, including agricultural research, economics and engineering. More recently, emphasis has been placed on specific research areas of potential significance to Brazil. One such research area is that of nitrogen fixation. This is similar to AID's world-wide interest in nitrogen fixation as reflected in it's two major projects - Nitrogen Fixation/Limiting Factors and the World Rhizobium Study Collection Center, related small projects - Seminars/Workshops and also 211(d) grants on Tropical Soils. The proposed work in Brazil would complement and augment U.S. knowledge about this diverse subject.

Recent research work on nitrogen fixation undertaken by a Brazilian group working at the Instituto de Pesquisa Agropecuaria de Centro-Sul (IPEACS) of the Brazilian agricultural research organization EMBRAPA led to the discovery of a hitherto unknown symbiotic association between nitrogen-fixing bacteria and root cells in certain tropical grasses and cereal grains--a discovery of great importance because of the potential contribution these symbioses can make to the protein content of plants.

As a result of this discovery of nitrogen fixation in tropical grasses, the CNPq decided in mid-1974 to sponsor an international cooperative project to intensify training and research in this area at the Universidade Federal Rural de Rio de Janeiro (UFRRJ) which currently has post-graduate programs in soil science in cooperation with the nitrogen fixation group at IPEACS (both institutions are at the same location). The NAS was invited to participate in the project. As a first step towards coordinating this program, an International Scientific Training and Research Advisory Committee, including three NAS participants, convened in Brazil, November 18-22, 1974 to draw up the program for international cooperation. Two major objectives were identified by the International Advisory Committee:

1. The setting up of realistic training programs so that Brazilian students and scientists could use and appreciate modern research techniques and become involved in careers in research on the means of increasing crop production in Brazil through the use of biological nitrogen fixation.

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2. The development and expansion of a research program based on the IPEACS studies. The aim of this research would be to exploit biological sources of nitrogen in place of fertilizers.

In order to overcome initial difficulties due to the relative scientific isolation of the research group at IPEACS/UFRRJ the research program will be supplemented with working visits by members of the International Advisory Committee, their associates and other scientists.

B. General Purpose: In accordance with AID's contract with the NAS to assist AID in strengthening the scientific and technological capabilities of developing countries, the NAS has proposed that funds be allocated for NAS participation and support of a program of international cooperation in training and research on nitrogen fixation in Brazil. By means of a Task Order under BOA:AID/csd-2584, the NAS over a three year period would identify and select up to five doctoral or post-doctoral fellows from the U. S. to conduct research and training on nitrogen fixation in Brazil. The NAS would support these fellows with funds for international travel, health insurance and research equipment. Staff of the NAS concerned with the project would also make periodic visits to Brazil while Brazilian scientists on the project would receive local travel funds from the NAS while working in the U. S.

C. Organization, Schedule and Budget: The NAS would provide the following activities under the Task Order:

1. Periodic visits (average one trip per year for each) by the NAS representatives on the International Advisory Committee, or their colleagues, to collaborate with their Brazilian counterparts in the research and training program. This will involve international travel and incidental expenses only; the Brazilians will provide local travel and per diem.

Identification of doctoral or post-doctoral fellows for the program to assist in the conduct of research and in training of Brazilian (and other) students. It is envisaged that during the first year one fellow and during the subsequent years, up to two fellows per year from the United States will be nominated for Brazilian-funded fellowships for a one or two-year period. The Academy will provide travel grants for their transportation (and their families, if appropriate, to Brazil, and health insurance. In order that their time be used to maximum effort, provision is made

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for fellows to purchase and take with them equipment, essential for them to begin their work on arrival and unavailable in Brazil. It is anticipated that the first equipment grant will be approximately \$5,000 per fellow; thereafter, it is estimated that the equipment grant will be up to \$4,000 per fellow.

3. Provisions of funds for Brazilian committee members to spend short periods (one during the first year; two per year thereafter) in the United States working at U.S. institutions; the Brazilians will pay for international travel; the Academy will provide for local travel and per diem costs.

The Brazilian contribution to the expanded program of training and research will include the fellowships, local travel and per diem for U.S. scientist participating in the program, facilities and ancillary administrative support to the project in Brazil. The projected annual budgets for this have been approved by the CNPq and EMBRAPA and amount to approximately \$200,000 per year.

PROPOSED BUDGET

AID/NAS SUPPORT OF THE PROGRAM  
April 15, 1976 - April 14, 1979

A. Program Administration

1. Personal Services *	\$10,156
2. Fringe Benefits	1,422
3. Travel-International	16,350
4. Communication & Shipping	1,300
5. Materials & Services	1,300
6. Indirect Costs (@36%)	<u>10,990</u>
TOTAL PART A -	\$41,518

B. To and on Behalf of Fellows

7. Travel Grants	22,050
8. Equipment	21,000
9. Insurance	1,418
10. Indirect Costs (5% of 7 & 36% of 9)	<u>1,614</u>
TOTAL PART B -	\$46,082

TOTAL PARTS A & B \$87,600\*\*

(Yearly Budgets: FY 76=\$23,864; FY 77=\$31,868; FY 78=\$31,868)

\*Includes accrual for annual and sick leave, holidays and other leave such as jury duty, military service and special personal leave.

\*\*It is understood that the contract will provide for advance payments.

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D. Involvement of Other Agencies: The basis of the program in Brazil is international cooperation. Through the program's International Advisory Committee the following organizations are involved in the effort: CSIRO/Australia; McGill University/Canada; University of Dundee/Scotland/UK; and, Universities of Florida, Oregon State and Wisconsin/USA. The British Overseas Development Ministry has made co-operative arrangements to support the program and the Australian Government is discussing similar arrangements. The program will also include yearly post-graduate fellowships for two fellows from either Latin America or Africa.

E. Reports: Annual reports on the progress of the proposed project would be submitted when appropriate.

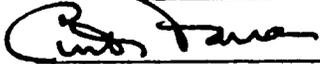
F. Evaluating Effectiveness: The TA/AGR project officer will periodically monitor the progress of the training aspect of the project and review the research findings for inputs into other AID funded research in nitrogen fixation.

G. AID Manpower Requirements: Dr. Frederick of TA/AGR will serve as the project manager which will require approximately 5 man days of work per annum.

H. Project Appraisal Report (PAR): PAR will include plans for utilization of research findings for other relevant research activities.

RECOMMENDATION

That approval be given for the negotiation and funding of a Task Order for a three year period under BOA/AID/csd-2584 with the National Academy of Sciences for the services indicated above.

Approved: 

Disapproved: \_\_\_\_\_

Date: 3/26/76.

931-11-196-247

UNITED STATES GOVERNMENT

# Memorandum

TO : TA/PPU, Mr. John Gunning

DATE: April 1, 1976

FROM : TA/AGR, Leon F. Hesser *LH*

SUBJECT: KPA-4 Funding of the Task Order with the National Academy of Sciences for Nitrogen Fixation/Research and Training in Brazil

REF: AA/TA Approval Memo, PIO/T and Other Supporting Documentation for the Subject Task Order

Please be informed that funds for the subject Task Order will be provided from KPA-4 sources. In particular, the \$23,864 requested for FY 1976 for the Task Order will be available within KPA-4 as a result of a projected reduction in the \$120,000 scheduled in FY 76 for the RSSA with USDA for the World Rhizobium Study-Collection Center (a new GTS project). This total \$120,000 was intended to be used over a longer period than will be permitted by the months remaining in FY 76 for initial implementation of the RSSA with USDA.



5010-110

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7310 247 (5)  
PD-AAC-767

DEPARTMENT OF STATE  
AGENCY FOR INTERNATIONAL DEVELOPMENT  
WASHINGTON, D.C. 20523

Mr. Thomas Gikas  
Assistant Business Manager  
National Academy of Sciences  
2101 Constitution Avenue  
Washington, D.C. 20418

SEP 29 1976

(4)  
247  
pl  
3p

Subject: Amendment No. 1 to  
Grant AID/ta-G-1329

Dear Mr. Gikas:

Pursuant to the Foreign Assistance Act of 1961, as amended, Grant AID/ta-G-1329 dated June 24, 1976 is hereby amended to provide additional funds in the amount of \$63,736. These additional funds are obligated as of the date of this letter and are to support the second year of activities as described in the original Grant. The amount of funds obligated under the Basic Grant and this Supplemental Grant now totals \$87,600. The attached revised illustrative budget is incorporated, effective with this amendment.

Except as expressly herein amended, the provisions of the original Grant remain in full force and effect in accordance with its terms.

Please sign the Statement of Assurance of Compliance and the original and all copies of this Amendment in the space provided below to acknowledge your understanding of the conditions under which this Amendment has been made. The original and seven (7) copies of this letter amendment should

FUNDS OBLIGATED	
Approp. No.	72-11X-1023
Allot. No.	402-31-094-00-2351
Obj. No.	3118610 Obj. Cl. 259
Amount	\$63,736.00
Proj. No.	931-11-560(247-73)
By	<i>[Signature]</i>
Date	9-29-76

be returned to this office. You may retain one (1) copy for your records.

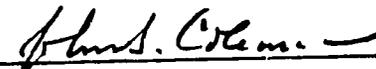
Sincerely yours,

  
V. C. Parelli  
Grant Officer  
Technical Assistance Branch  
Central Operations Division  
Office of Contract Management

Attachment:  
Illustrative Budget (Revised)

ACKNOWLEDGED:

NATIONAL ACADEMY OF SCIENCES

BY: 

TITLE: John S. Coleman  
Executive Officer

DATE: OCT 21 1976

Attachment to Amendment 1  
to Grant No. AID/ta-G-1329

VI. ILLUSTRATIVE BUDGET (REVISED)

<u>ITEMS</u>	<u>1st year</u> FR: June 1976 TO: 4/14/77	<u>2nd year</u> FR: 4/15/77 TO: 6/30/78	<u>3rd year</u> FR: 7/1/78 TO: 4/14/79	<u>Totals</u>
<u>PROGRAM ADMINISTRATION</u>				
1. Salaries	\$ 3,386	\$ 3,645	\$ 3,125	\$10,156
2. Fringe Benefits	542	583	499	1,624
3. Travel - International	5,255	5,450	5,645	16,350
4. Communications & shipping	434	445	171	1,050
5. Materials & Services	434	600	91	1,125
6. Indirect Costs	<u>3,791</u>	<u>4,183</u>	<u>3,753</u>	<u>11,727</u>
Sub-Total	\$13,842	\$14,906	\$13,284	\$42,032
<u>TO AND ON BEHALF OF THE FELLOWS</u>				
7. Travel Grants	4,410	7,400	10,240	22,050
8. Equipment	5,000	8,000	8,000	21,000
9. Insurance	286	578	554	1,418
10. Indirect Costs	<u>220</u>	<u>370</u>	<u>510</u>	<u>1,100</u>
Sub-Totals	\$9,916	\$16,348	\$19,304	\$45,568
 <u>GRAND TOTAL</u>	 \$23,758	 \$31,254	 \$32,588	 \$87,600

PROJECT AUTHORIZATION AND REQUEST FOR ALLOTMENT OF FUNDS

9310247 (6)  
PD AAC. 767  
(4)

PART II

ENTITY: Bureau For Development Support

PROJECT: N-Fixation Research and Training

PROJECT NUMBER: 931-0247.11

I hereby authorize an unfunded extension of one year and five and one half months (from April 15, 1979 to September 30, 1980) of the project "N-Fixation-Research and Training" with the National Academy of Sciences in order to satisfactorily complete the work as originally approved.

6p.

Tony Babb  
Deputy Assistant Administrator  
for Food and Nutrition  
Bureau for Development Support

Date 3.18.79

Attachment:

- 1. Action Memo: Peterson to DAA/FN/DS

Clearances:

DS/AGR/TSWM: LFrederick [Signature] Date 9.21.77  
DS/AGR/TSWM: GCorey [Signature] Date 9.21.78  
DS/AGR: MZozynski [Signature] Date 7.21.79  
DS/AGR: DPeterson [Signature] Date 7.21.79  
DS/PO: Rogers [Signature] Date 7.21.79  
DS/PO: RSimpson [Signature] Date 4.11.79

DS/AGR/TSWM: LFrederick: am: 1-18-79: X58877



FEB 08 1979

ACTION MEMORANDUM FOR THE DEPUTY ASSISTANT ADMINISTRATOR  
FOR FOOD AND NUTRITION, BUREAU FOR DEVELOPMENT SUPPORT

FROM: DS/AGR, Dean F. Peterson

Problem: Your approval is required for a one and one half year unfunded extension of the project "N-Fixation-Research and Training" with the National Academy of Sciences.

Discussion: In 1976 A.I.D. initiated this project to support the National Academy of Sciences (NAS) participation in a program of international cooperation for training and research on tropical nitrogen fixation in Brazil. The project was approved and fully funded with \$88,000 for a three year period and is currently scheduled to terminate on April 14, 1979. The NAS has now requested that the grant (AID/ta-G-1329), which implements this project, be extended without additional funds from April 15, 1979 to September 30, 1980 in order to satisfactorily complete the work as originally contemplated. (See attached letter: Gikas/NAS to Perelli/AID).

This project is an outgrowth of a bilateral program started in 1965 between the NAS and the Brazilian National Research Council (CNPq). The program has involved a series of US-Brazilian scientific exchanges and workshops for the study of key problems of development and technical policies/programs aimed at increasing Brazilian scientific capabilities in areas relating to their national development goals including agricultural research, economics and engineering. More recently, emphasis has been placed on specific research areas of potential significance to Brazil. One such area is that of biological nitrogen fixation (BNF). In mid-1974 the CNPq decided to sponsor an international cooperative effort to intensify research and training in this area. The NAS was invited to participate. As a first step a Scientific Training and Research Advisory Committee, including three NAS participants, met in Brazil in November 1974 to identify major objectives and to outline the various components of future activities. The two main objectives were: (1) to establish a realistic training program for Brazilian students and scientists to learn modern research techniques involved in BNF; and (2) to

develop and expand local research programs on BNF. At A.I.D.'s request, NAS submitted a proposal to DS/AGR for financial support for participation in this Brazilian BNF effort. NAS's proposal spelled out a three year effort for a total cost of \$88,000 to be used for three major activities:

1. Periodic visits (average one trip to Brazil per year for each) by the NAS representatives on the International Advisory Committee to collaborate with their Brazilian counterparts in the research and training program. This involves international travel and incidental expenses only; the Brazilians provide local travel and per diem.
2. Identification of doctoral or post-doctoral fellows from the U.S.A. for the program to assist in research and training of Brazilian (and other) students. The NAS provides travel grants for their transportation and their families (if appropriate) to Brazil, and health insurance. In order that their time be used to maximum effort, provision is made for the fellows to purchase and take with them equipment which is essential for them to begin their work on arrival and is unavailable in Brazil. It was anticipated that the first equipment grant would be approximately \$5,000 per fellow; thereafter, it was estimated that the equipment grants would be up to \$4,000 per fellow.
3. Provisions of funds for Brazilian committee members or selected scientists to spend short periods (one during the first year; two per year thereafter) in the United States working at U.S. institutions; the Brazilians pay for international travel; the NAS provides for local travel and per diem costs.

The Brazilian contribution to the expanded program of training and research includes the fellowships, local travel and per diem for U.S. scientist participating in the program, facilities and ancillary administrative support. The annual budget amounts to approximately \$200,000 per year. The British and Australians are also contributing to this international effort. The work in Brazil is linked to, and augments, the rest of A.I.D.'s BNF program, especially its research on "N-Fixation by Associative Grass Bacteria Systems" with the University of Florida.

An unfunded extension of this project through September 30, 1980 is required in order to complete the activities as originally planned and

approved. It was planned that up to seven U.S. post-doctoral fellows would receive travel and equipment funds under this project for work in Brazil. This constitutes the biggest component of the project's three year budget. To date only three fellows have gone. With this unfunded extension up to four more post-doctorals would go to Brazil. Numerous difficulties have arisen which caused this small number of U.S. post-doctorals working Brazil to date. Major causes have been: a) Brazilian reluctance to approve U.S. applied scientists under the post-doctoral fellow exchange in favor of scientists working on more basic research such as enzymatic approaches; b) Brazilian currency conversion restrictions; c) better BNF job opportunities in the U.S.A.; d) recognition that BNF by grasses is more complex and will require a longer term research effort than originally perceived with a corresponding reduction in enthusiasm by potential post-doctoral candidates and e) a shift of emphasis from selecting recent post doctoral graduates to those having greater experience. This unfunded extension will provide the time to complete the planned funding of U.S. post-doctoral fellows as well as to allow continued short term exchange visits of U.S. and Brazilian scientists which make up the rest of this projects approved activities as discussed above.

Recommendations: That you approve the unfunded extension discussed above by signing the attached PAF.

Attachments:

1. PAF
2. Letter: Gikas/NAS to Perelli:/AID dated December 26, 1978

Clearances:

DS/AGR/TSWM:LFrederick <i>LF</i>	Date <i>9 Feb 79</i>
DS/AGR/TSWM:GCorey <i>GC</i>	Date <i>9 Feb 79</i>
DS/AGR:MMozynski <i>MM</i>	Date <i>7 Mar 79</i>
DS/PO:Rogers <i>R</i>	Date <i>9 Mar 79</i>
DS/PO:RSimpson <i>RS</i>	Date <i>14 Mar 79</i>

*SE*  
DS/AGR/TSWM:SEngberg:am2/8/79:X58877

NATIONAL ACADEMY OF SCIENCES

OFFICE OF CONTRACTS AND GRANTS  
2101 CONSTITUTION AVENUE  
WASHINGTON, D. C. 20418

December 26, 1978

Mrs. V. C. Perelli  
Grant Officer, Technical Assistance Branch  
Central Operations Division  
Office of Contract Management  
Agency for International Development  
1735 N. Lynn Street, Pompano Plaza  
Rosslyn, Virginia 20523

RE: Contract No, AID/ta-G-1329  
Expiration Date; April 14, 1979

Dear Mrs. Perelli:

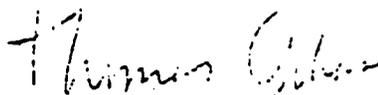
The referenced contract has a current expiration date as indicated above. We have reviewed the work under this contract and as a result have determined that additional time is needed to satisfactorily complete the work contemplated.

The unexpended balance as of September 30, 1978 is \$49,249 for this contract and appears sufficient to cover all anticipated expenditures through the period of the requested extension.

Therefore we request that the contract be extended without additional funds until September 30, 1980.

If this request meets with your approval, we would appreciate having an appropriate amendment sent to us for execution at your convenience.

Sincerely yours,



Thomas Gikas, Director  
Office of Contracts and Grants

TG:dm

cc: Dr. Rabinowitch  
Mr. Todd  
Mr. Williams

Dr. Rabinowitch = [unclear]