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

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CERTIFIED A TRUE COPY THIS
24 DAY OF August
BY *SO [Signature]*

AUG 4 1978

Ms. Jane A. Youngers
Assistant Director
Office of Academic Funding
Cornell University
Ithaca, New York 14853

Subject: Grant No. AID/DSAN-G-0037
Cognizant Technical Office:
Bureau for Development Support
DS/AGR/SWM

Dear Ms. Youngers:

Pursuant to the authority contained in the Foreign Assistance Act of 1961, as amended, the Agency for International Development (hereinafter referred to as "A.I.D." or "Grantor") hereby grants to Cornell University (hereinafter referred to as "Cornell University" or "Grantee") the sum of \$55,142 to provide support for a program in organizing and co-sponsoring an "International Workshop on Program Priorities for Alleviating Soil Related Constraints to Food Production" as more fully described in the attachment to this Grant entitled "Program Description".

This Grant is effective and obligation is made as of the date of this letter and shall apply to commitments made by the Grantee in furtherance of program objectives during the period August 15, 1978 through June 30, 1980.

This Grant is made to Cornell University on condition that the funds will be administered in accordance with the terms and conditions as set forth in Attachment 1 entitled "Program Description" and Attachment 2 entitled "Standard Provisions" which have been agreed to by your organization.

Please sign the Statement of Assurance of Compliance, enclosed herein, and the original and seven (7) copies of this letter to acknowledge your acceptance of the conditions under which these funds have been granted.

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Page 2 - Ms. Jane A. Youngers :

Please return the Statement of Assurance of Compliance and the original and six (6) copies of this Grant to the Office of Contract Management.

Sincerely yours,

Edward H. Thomas

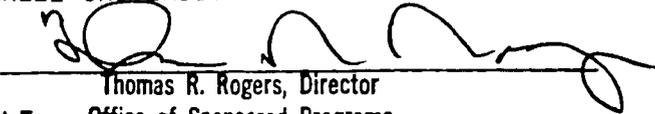
Edward H. Thomas
Grant Officer
Agriculture/Nutrition Branch
Acting
Central Operations Division
Office of Contract Management

Attachments:

1. Program Description
2. Standard Provisions
3. Statement of Assurance of Compliance

ACCEPTED:

CORNELL UNIVERSITY

BY: 

Thomas R. Rogers, Director

TITLE: Office of Sponsored Programs

DATE: 8-15-88

Fiscal Data

Appropriation: 72-1181021.3

Allotment: 843-36-099-00-20-81

PIO/T No.: 3188985

Project No.: 931-1156

Total Grant Amount: \$55,142

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PROGRAM DESCRIPTION**A. Purpose of Grant**

The purpose of this Grant is to provide partial support in organizing and co-sponsoring an International Workshop on Program Priorities for Alleviating Soil-Related Constraints to Food Production to be held in Los Banos, Philippines during April/May 1979 as more specifically defined in the Cornell University proposal which is incorporated herein as Attachment A.

B. Specific Objectives

The specific objective of this Grant is to increase the overall effectiveness of worldwide research activities on tropical soils and to maximize the utilization and application of the results of this research for food production in the developing nations.

C. Implementation

AID will provide partial funding for the Grantee to carry out the activities of the Workshop as specified in Attachment A.

D. Reporting

The proceedings will be published in 2,000 copies and will include relevant data, papers, discussions and recommendations of the workshop. 300 copies of the printed proceedings will be for AID use. The Grantee will disseminate copies to workshop participants and appropriate research and development institutions, agencies, and scientists (in both LDC's and DC's) and others in consultation with AID. AID will assist the Grantee to develop a comprehensive distribution list for this purpose. The distribution list should be ready by February 1980. Liaison and coordination with the Grantee regarding publication activities will be through AID's offices of DS/AGR and DS/DIU. The Grantee shall submit three copies of the proceedings directly to the Documentation Coordinator, DS/DIU, Agency for International Development, Washington, D.C. 20523 or his designee. Such copies shall include a title page showing the title of the proceedings, project title as set forth in the Grant and the Grant number. One copy of the proceedings shall be clearly typed or printed on white paper so that it may be photographed to produce a microfilm master. The proceedings shall be accompanied by an editor prepared abstract. The proceedings will be in English.

E. Budget

The funds herein shall be used to finance the following items:

BUDGET

<u>Cost Element</u>	<u>Total Estimated Cost</u> <u>FR: 8/15/78 TO: 6/30/80</u>
Travel & Per Diem	\$36,050
Publication Costs	14,000
Salaries	2,750
Fringe Benefits	632
Indirect Costs	<u>1,710</u>
Total	\$55,142

The Grantee may not exceed the total amount of the Budget. Adjustments among line items are unrestricted.

F. Special Provisions

1. The following numbered Standard Provisions of Attachment 2 are not applicable to this Grant: 6, 7A, 7C, 9, 11, 12A, 12C, 15, 16 and 17.
2. The following is added as a Standard Provision of Attachment 2 of this Grant: Standard Provision 28 - Voucher Identification. Each voucher (SF 1034) submitted by the Grantee for payment hereunder shall include the following identification data on the face of the voucher:

Grant No.: AID/DSAN-G-0031
Project No.: 931-1156
Project Office: DS/AGR/SWM

3. Payment under this Grant will be in accordance with Attachment 2, Standard Provision 7B entitled, Payment-Periodic Advance. The initial advance mentioned therein shall be sufficient for anticipated costs to be incurred by the Grantee until he requests and receives its advance for the ensuing period in accordance with the aforesaid Provision 7B. The Grantee will submit form nos. SF 1034, SF 269, and SF 272 as required by this payment provision to the following address:

Agency for International Development
Office of Financial Management
SER/FM/PAD
Washington, D.C. 20523

G. Overhead Rates

Pursuant to Standard Provision 5A entitled "Negotiated Overhead Rates - Predetermined," a rate or rates shall be established for each of the Grantee's accounting periods during the term of this Grant. The rate is set forth below:

	<u>Rate</u>	<u>Base</u>	<u>Period</u>
On-Campus (Provisional)	62.2%	Salaries & Wages*	FR: 8/15/78 TO: Until Amended

*Including vacation, holiday and sick pay but excluding other fringe benefits, overtime premium and sabbatical leave costs.

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**Proposal for a Workshop on
Program Priorities for Alleviating
Soil Related Constraints to Food Production**

(1) The Problem

Foodcrop production in large areas of the tropics is hindered by a significant number of soil-related constraints. Many of these limitations are site specific. On the other hand, advances in plant breeding have brought increased specialization in foodcrops' edaphic requirements. Matching both land qualities and crop demands for water and nutrients calls for more communication among soil and plant scientists. In this way, benefits derived from increased genetic potential of crops and improved knowledge of the characteristics and availability of physical resources can be maximized.

There have been many excellent attempts to define priorities in agricultural research for the tropics, where hunger is most widespread. The National Academy of Science (1977) compiled a research priority list for fighting world hunger. When problems of malnutrition are discussed on a global basis however, the list of research needs encompasses practically all the components of food production. At this scale priorities cannot easily be differentiated. What is a problem in one location is not necessarily a problem in another, thus a stratification of constraints into regions is required before any action is undertaken.

International research centers and experiment stations in LDCs all face the problem of effectively transferring the potential of high yielding varieties into small farmers' fields. Outreach programs need guidelines for defining the degree to which research findings can be transferred. Soil geography, appraisal, and management specialists, can on the one hand contribute by defining areas of transferability, while plant breeders, on the other hand, can provide information on plant requirements which will indicate what amendments are needed to correct soil limitations which restrict economic crop production.

Until now, soil and crop scientists at experiment stations and crop centers have worked in relative isolation from each other and their counterparts in other regions although many common problems exist which could be solved more efficiently by joint efforts. Examples of a few such problems are listed here under:

(a) Some 100 million ha of land in South and South-East Asia, while climatically suited for rice production, lie idle because of coastal salinity, acid sulfate soil conditions, or drainage and subsidence

problems.

(b) Soil stress oriented crop breeding programs could open up the latent potential of large areas of underutilized land available for food production. The African and South American rainforest and savannah areas would greatly benefit from such an approach.

(c) Drought stress from erratic rainfall during the beginning of a cropping season, drastically reduces yields in rainfed agriculture. Research on proper management of soil water during land preparation and fallow could bring many needed advances.

(d) Nutrient deficiencies are widespread in most of the tropical world; Research in farming systems with balanced application of fertilizers is required to keep intensive food production programs profitable.

(2) Present Efforts

On a world wide basis, there are, at all levels, isolated efforts to tackle the problems mentioned above. Most experiment station programs center around commodities, and are not staffed adequately to implement research results which are soil specific.

In the US, five educational institutions: Cornell University, the University of Hawaii, North Carolina State University, Prairie View A & M University and the University of Puerto Rico joined together, in 1970, under section 211(d) of the Foreign Assistance Act of 1961, as amended in 1966, to form a Consortium on Soils of the Tropics. This Consortium of universities serves as a pool for U.S. expertise in tropical soils. It is involved in research, education and training, information systems, and technology transfer for increased food production in the tropics. The University of Minnesota joined the Consortium in 1976 as the sixth member. The Universities of Florida and Wisconsin participated in Consortium planning activities in 1977.

All eight universities have made a long-term commitment to involvement with tropical soils research and utilization efforts to help increase world food production. Some of the member universities have a long history of successful activities in less developed countries; all share the commitment to and capabilities of participating in cooperative projects. Within the framework of 211(d) grant the major emphasis is to strengthen the teaching, advisory and research capability of the US Universities

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for utilization in LDC's. The impact of education is long term. The immediate practical impact of research will depend on the linkages with institutions in the LDC's, and/or international centers.

The Consortium works across the commodity spectrum. Its objective is to help achieve optimum use of land through systems which are best adapted to local conditions, and will maximize returns from natural resources through proper soil management.

USDA has developed in the last 25 years a system of soil classification which finds world application in technology transfer and creates an internationally accepted language for scientific communication. Further contribution of USDA to international soil correlation efforts will be essential to improve technology transfer.

FAO is very active in developing a methodology for land evaluation which is purpose oriented. Land qualities are evaluated for specific crops. At their last expert consultation on land evaluation standards, in October 1977, it was recommended that FAO initiate work on guidelines to evaluate relationships between crop requirements and land characteristics. This would be a complementary endeavour, in line with the objectives of the proposed workshop.

(3) Proposed Workshop

As mentioned earlier, there is an urgent need to coordinate the programs of LDC institutions, U.S. Universities, Research Institutes and Universities in other developed countries, the International Centers and International Organizations active in tropical soil research. The workshop would consider mechanisms to encourage coordination of activities in the field of soil and crop management.

The first step toward formalizing linkages would be to hold the proposed workshop which would bring together scientists from International Centers, interested U.S. Universities, and selected institutions of the developing countries, in cooperation with other national and international groups. The principal intent of such a meeting would be to develop procedures through which linkages and cooperation could be strengthened. Such a conference has been suggested by Dr. Nyle Brady, Director of IRRI, and was discussed and approved by the Consortium on Soils of the Tropics at their meetings on July 21-22, 1977.

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(a) Objectives

The overall objectives of the conference are:

1. To facilitate a world-wide scientific focus on soil-based constraints to food production in the developing countries of the tropics and semitropics.
2. To identify major soil-based constraints, their areal extent, and known practical methods of alleviating them.
3. To develop tentative program strategies which participating soil scientists can use in further identifying soil-based constraints and in developing methods to alleviate these constraints.

As means to accomplish the overall objectives, the conference will work to produce as follows:

1. General surveys of the geographic distribution of areas with major soil-related constraints and the identification of major socio economic characteristics of these areas.
2. Analysis of the major soil factors responsible for constraints on crop yields and production in the developing countries.
3. Critical analysis of the economically feasible practices which will wholly or in part remove the soil related constraints on food production.

It would finally determine programs and structure actions by defining program strategies to be followed to further ascertain soil-related constraints and their alleviation, with special reference to:

1. Collaboration between centers and national researchers.
 2. Inter-center cooperation and collaboration.
 3. Appropriate involvement of scientists from universities and research institutes from the more developed countries (e.g. Title XII arrangements in U.S. and specific research project proposals in Europe, Australia, and Japan).
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It would promote extension and dissemination of economically feasible programs to reduce soil related constraints in LDC's.

(b) Participants

1. Soil and Plant Scientists from the International Centers, U.S. Universities, International Organizations, and scientists from more developed countries, who have great interest and extensive experience in research in the tropics.
2. Two or three center resource economists and/or farm management specialists knowledgeable about factors limiting crop production.
3. Selected soil and plant scientists from a few select national research centers (of developing countries) where research is a major function.

The location of the workshop would be at the International Rice Research Institute at Los Baños, Philippines.

The number of participants would be about 40, half of which would be supported by this grant to cover their travel expenses.

(c) Duration: About ten working days.

(d) Period: Spring 1979

(4) General Plan

(a) Cornell and IRRI would jointly sponsor the proposed conference, under partial USAID support.

(b) A steering committee would coordinate the program of the workshop. The chairman of that committee would be the principal investigator of this grant. The members of the committee would be selected jointly by the Director of IRRI and the principal investigator.

(c) Other donors have been approached to provide some additional funding; UNDP is considering approximately the same financial support as the US contribution.

(d) IRRI would provide meeting facilities for the workshop and take responsibility for operational arrangements; its editorial staff would be utilized, and

senior scientists would develop plans for local activities during the conference. A memorandum of understanding between Cornell and IRRI would have to be worked out at the first meeting of the steering committee.

(c) Participation in the workshop would be by invitation only.

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