

GUIDELINES FOR THE CONDUCT OF
COLLABORATIVE RESEARCH SUPPORT ACTIVITY
UNDER TITLE XII OF THE
INTERNATIONAL DEVELOPMENT AND FOOD ASSISTANCE ACT OF 1975

A REPORT OF THE JOINT RESEARCH COMMITTEE
OF THE
BOARD FOR INTERNATIONAL FOOD AND AGRICULTURAL DEVELOPMENT

October 11, 1977

INTRODUCTION^{1/}

Purpose of this Report

Title XII, Section 298(d) of the International Development and Food Assistance Act of 1975 states that "The President may authorize the Board to create such subordinate units as may be necessary for the performance of its duties, including, but not limited to, the following:

"A Joint Research Committee to participate in the administration and development of the collaborative activities described in Section 297(a), (3) of this Title."^{2/}

Section 297(a) provides authority for a totally new type of research program. This program, of central concern to this report, is identified in the legislation as follows: "...to provide program support for long-term collaborative university research on food production, distribution, storage, marketing, and consumption."^{3/ 4/}

^{1/}The paper outlines general approaches and concepts to guide the development of the new research effort herein described. It is understood that all activities to be undertaken within these guidelines in the implementation of this research effort must be in accordance with applicable U.S. laws, regulations and policies. To the extent that new procedures are required for the implementation of these activities, they will be developed in conformance with these applicable laws.

^{2/}A description of the Joint Research Committee (JRC) and its role under the Board for International Food and Agricultural Development has previously been approved by the Board. The Board has expanded the role of the JRC to cover all research activities encompassed under Title XII.

^{3/}For the purpose of this report, the definition of a U.S. university is as described in the Act, Section 296(d).

^{4/}Universities interested in potential involvement under Title XII research authorities may desire a criterion to distinguish "collaborative research" from "centrally funded research" contracts. The JRC suggests this be based on an evaluation by the university as to whether or not university resources are to be committed to the program, since this commitment is required of all "collaborative research" programs, but not required for "centrally funded research" projects. (See page 7).

This report outlines briefly and recommends for consideration by the Board for International Food and Agricultural Development and by the Agency for International Development the underlying concepts and general characteristics of desirable approaches for implementing this new research authority. Although this report describes the operational guidelines for implementation of the Collaborative Research Support programs, it is important to note there are other research program categories which function under Title XII authority. Centrally funded research contracts for programs with U.S. institutions and developing countries will be continued as in the past, with initial evaluation by the JRC. Also, it is expected that some research projects linking U.S. institutions and developing countries will be funded as parts of A.I.D. country programs and hence will fall under immediate cognizance of the JCAD.^{1/}

Background

Concepts and recommendations presented here have evolved in part from an extended discussion process between A.I.D. and representatives of agricultural universities and the USDA, starting before and extending through the development of Title XII legislation, and culminating in an earlier report prepared by an ad hoc committee consisting primarily of university representatives (Hutchinson report).

These discussions were based on a mutual desire to explore possibilities of drawing upon the long experience of "Hatch Act" and other collaboration between the U.S. Department of Agriculture and state-supported research institutions, which feature federal support to state-funded research, justified by the complementarities of benefit to U.S. Government and individual state objectives.

The "Hatch Act" model does not provide a closely replicable analogy, however, as both U.S. Government research funds and those from the several states are all directed to the benefit of the U.S. public--albeit at a different level of governmental aggregation--and both USDA and the several state research institutions are mandated to serve those domestic U.S. interests. In contrast, U.S. funds for foreign assistance are to assist the peoples of developing countries and the Agency for International Development is mandated to use its resources to that purpose.

^{1/}The "Joint Committee on Agricultural Development", a subordinate of the Board, comparable to JRC but focusing on country programs.

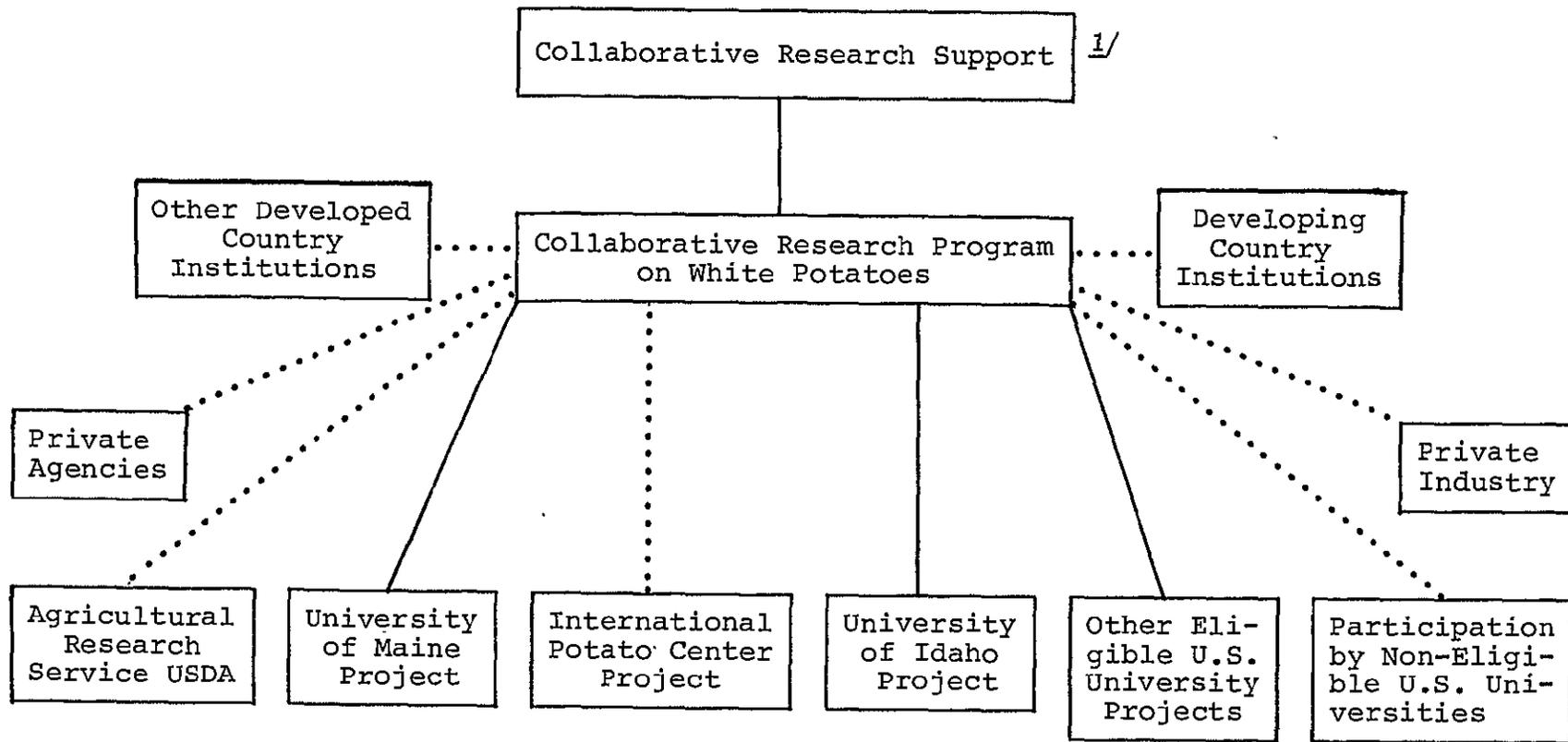
However, agricultural leaders concerned both with domestic and with developing country needs for research-based science and technology have come increasingly to see large areas of overlap of subject matter and the resulting substantial mutual advantage of joint research program efforts which cut across national boundaries and different levels of agricultural development. Most commercial crops and animals produced in the U.S. have origins in what are now the developing countries and most of the world's food is from crops and animals which are common to both the more and the less developed countries. Furthermore, such production-limiting factors as plant and animal disease, and climate (temperature, humidity, etc.) and soil constraints, are often best studied under the conditions of maximum stress which frequently occur in developing countries. Most important, solutions of specific, major technical problems often require critical masses of scientific talent and institutional resources not usually available to a single country.

THE PROGRAM

Some Definitions

"Collaborative Research Support" is the generic term given to the activities carried out primarily under Section 297(a), (3) of Title XII. This is research jointly supported by A.I.D. and collaborating institutions. Specific multi-institutional collaborative programs addressed to specific problems of food production, distribution, storage, marketing, or consumption are designated as "Collaborative Research Support Programs". Formally organized individual components of a given Collaborative Research Support Program may be designated as projects. One example of this approach is given on the following page.

The term "Collaborative Research Support Program" denotes an arrangement which facilitates collaboration among U.S. universities, U.S. Department of Commerce, USDA, International Agricultural Research Centers, other research institutions, private agencies and industry, and developing country university and other research institutions on a problem-oriented basis in a common research and development program to solve a priority food and nutrition problem. (See Program Planning section on pages 9-11). This may require fundamental research. The diagram shown on the following page is for the purpose of illustration and it should be recognized that there are many other variations which could be developed. Participation by small and less experienced, eligible universities and other interested institutions (public and private) will be encouraged.



^{1/} By definition in the Title XII legislation, support funds for Collaborative Research Support Programs may be granted only to eligible institutions as defined in that Title. In the diagram this means the linkages with solid lines indicate potential support funding of eligible institutions, through the management entity (Page 9), while dotted lines indicate funding can occur only through a contract or sub-contract for prescribed services from the management entity or one of the participating eligible institutions. As indicated on Page 10, only in the special case where the management entity itself is an eligible university can it receive support funds; in other cases its services may be obtained through appropriate contract arrangements.

The Concept

The amelioration of world food, nutrition, and poverty problems will require considerable expansion in a comprehensive body of relevant scientific knowledge. While expanding, the research capacity extant in the developing nations is insufficient to the task of providing such in an acceptable time frame. The special purpose international agricultural research centers have considerable capacity to contribute to certain of these knowledge needs; however, this also is insufficient. The agricultural research establishment of the American higher education community, the USDA, U.S. Department of Commerce, and other federal research organizations, has extensive capacity to work effectively on this set of problems. For a variety of reasons, this capacity has not been brought to bear in sufficiently comprehensive fashion on these issues. If progress is to be made, and the U.S. foreign assistance commitment effectively discharged, this latter capacity must be mobilized to work in collaborative fashion with the international agricultural research centers and, even more important, the agricultural research institutions in the developing nations. Conceptually, it is the creation of an instrumentality capable of mobilizing this talent and permitting it to play a significant role in high-payoff, problem-oriented, research programs that is of principal concern.

This instrumentality and the collaborative research programs which it generates must also be capable of assuming effective interaction and complementarity with national, bi-national, and multi-national agricultural development programs in developing nations.

Research programs of U.S. agricultural research institutions have, to a degree, become specialized in response to the specific characteristics of agriculture within their respective state. Since the late 1940's the U.S. state agricultural experiment stations have collaborated in research planning and implementation on a regional basis through a formal process entitled "Regional Research" which is funded by Congress for that specific purpose. Regional research projects have enabled state agricultural experiment stations to contribute specialized research competence to the solution of comprehensive problems. The rising relative and absolute costs of scientific research will inevitably force more such specialization because it is becoming increasingly more difficult for a U.S. state agricultural research institution to cover the research needs of all components of agriculture in that state.

Similarly, developing country institutions cannot be all things to all people. Certain basic minimal response capabilities to major agricultural needs must be developed and maintained in each country; but such institutions will have to make priority decisions and choices among competing needs in order to devote enough attention to any one problem to make significant contributions and thereby earn their constituents' support.

In some subject matter areas, International Agricultural Research Centers have been established, and in some subject matter areas these address problems confronted by developing country and U.S. agriculture alike. These Centers are supported by some thirty donor members of the Consultative Group on International Agricultural Research (CGIAR) of which the U.S. is one of the major donors. The Centers focus their research and training programs on the major food sources of the developing countries. Their successful operation is dependent upon establishment of effective linkages, on the one hand with the client developing country research systems, and on the other, for supportive research with appropriate institutions in the developed countries.

Program Approach

The "Collaborative Research Support Program" approach will link institutions having common interests in organized programs of research on selected problems. Such a collaborative research program on a single problem of common interest to the U.S. and several of the developing nations might involve a single U.S. institution as the U.S. leader, an international center, and several developing nation agricultural universities or research centers. More commonly, two or more U.S. universities with exceptional competence and interest in the problem would work as a team with the collaborating foreign institutions either under a special consortium or under prime grantee/sub-grantee or subcontractor arrangement. Under any organizational model, certain specialized competencies required for effective solution of a given problem might not be available in the principal participating institutions and would need to be drawn from whichever source, U.S. or foreign, most capable of providing them.

The management entity will assume overall responsibility for managing the program and will fund sub-grantees or subcontractors according to criteria approved by A.I.D. All such

funds would be used to support research by eligible universities, or to fund research by other participating entities, in a Collaborative Research Support Program, as agreed upon and approved.^{1/}

These funds could be used for such purposes as:

- financing those components of appropriately reoriented U.S. based research programs having identifiable utility in solution of developing country problems;
- financing planning and organizational costs which are necessary to carry out the research programs;
- financing overseas research activities of U.S. faculty and graduate students working on approved collaborative research programs;
- financing research arrangements of management entities and eligible universities with collaborating developing country institutions or individuals, and for conducting research in practical developing country farm situations to test validity, relevance and applicability of findings;
- financing developing country and U.S. graduate students and other junior U.S. scientists on research necessary to prosecution of the problem-solving activity;
- Financing development of research information exchange systems including conferences, data storage and retrieval systems, publications, materials exchanges, professional exchange arrangements and any other arrangements necessary to prosecution of the problem-solving activity;
- financing special activities specific to the participation of International Agricultural Research Centers on approved research not covered by their budgets; and
- financing such other functions as are essential to effective conduct of approved collaborative research programs.

^{1/} Statutory authority to fund research activities of foreign institutions in collaboration with U.S. universities may be technically contained in provisions of the Foreign Assistance Act other than section 297(a) (3)--for instance, section 297(a) (2) and (5). All potential aspects of Collaborative Research Programs, whether or not carried out by U.S. universities, are collected in the guidelines' discussion of collaborative research activities.

The bulk of the contribution to the total program would come, of course, from the U.S. and foreign institutions' own resources devoted to their research efforts; however, the new international component of most programs would be paid primarily by A.I.D. funding for Title XII programs. Collaborating U.S. institutions would likely be those with a high performance potential as judged by commitment or willingness to become committed (and not exclusively by experience in the field), professional research capability and related factors. It is expected that collaborating institutions would elect to participate in programs which would be complementary to their own domestic responsibilities.

Collaborating developing country institutions would participate out of their sense of the priority research needs of the constituencies they serve and their capability to contribute to solution of the identified priority research problems.

Division of effort would be worked out in large part by the collaborating researchers themselves. It would not necessarily follow a standard pattern. In some cases, U.S. scientists might do the major portion of the more basic research, because of access to costly laboratory facilities and specific expertise; in other instances, because of special aptitudes or interest, this might be a primary contribution of developing country researchers. Interest, capability and, above all, design requirements of an effective research program would be the ultimate considerations.

Characteristics of an Administrative Entity

For each Collaborative Research Support Program, an administrative "Management Entity", with appropriate legal status, not necessarily a corporation, will be required for administering the resources contributed by A.I.D. and for overseeing the individual projects comprising the program. This management entity would receive and administer A.I.D. grant funds for the Collaborative Research Support Program, sub-allocating them to the participating U.S. and developing country institutions for their respective projects. The management entity should have the capacity to coordinate the effective implementation of the program and be responsible for implementation of the budgetary plans including the contributions to the projects of the participating institutions.

The management entity might be a lead U.S. university, or other institution, an administrative unit within a lead university, a special consortium of universities or other body representing the participating institutions. An entity, or a combination

(such as a joint venture) of entities, eligible to receive grant support under Title XII are the preferred types of management entities. Although in some limited number of problem areas it may be possible for a single university to conduct a Collaborative Research Support Program without involving other U.S. institutions, this approach would not be typical. Selection of management entities and their relations with grantees would, as appropriate, be in accordance with the collaborative assistance approach provided in Appendix H, Subpart 7-4.58, Collaborative Assistance.

Only in the case where the management entity is an eligible university, or a group of eligible universities organized as a joint venture, could the management entity be eligible to receive, by grant, support funds as defined in Title XII. In all other cases, the services provided to A.I.D. by the management entity for execution of the Collaborative Research Support Program would be financed through appropriate contract arrangements.

In this concept, funds for a grant for a given Collaborative Research Support Program would flow from A.I.D. to the management entity and from that entity to each institution participating through projects in a Collaborative Research Support Program. A.I.D. would hold the management entity responsible, through established A.I.D. management procedures, for performance of the Collaborative Research Support Program. A.I.D. would assure that the management entity would manage the program in accordance with the overall plan and budget agreed to by A.I.D. and the management entity. The JRC will, through the Board, assist A.I.D. in execution of all these activities by such continuing evaluational and other program development and monitoring mechanisms as may be evolved. Similarly, A.I.D. would hold the management entity accountable for the funds and for their appropriate use in all aspects of the Collaborative Research Support Program, and this entity would, in turn, hold the participating institutions accountable for the funds and for their use in the projects according to budgetary plans. A suitable system of accountability would be developed between the management entity, the contributing universities and A.I.D. for holding participating institutions accountable for use of A.I.D. funds in their projects. Such a management system is essential for efficient management of a number of participating university projects comprising a Collaborative Research Support Program. It is hoped that this will facilitate participation of a wide range of institutions, make available a diversity of scientific talent, and assure that all necessary disciplinary and institutional components of a Collaborative Research Support Program will be integrated into a comprehensive effort.

Program Planning

The Joint Research Committee (JRC) will be responsible for preparing a prioritized list of programs suitable for addressing world food problems, with specific areas identified with each program. After this list is prepared and approved by BIFAD and A.I.D., the JRC will assist BIFAD, and ultimately A.I.D., in doing the necessary planning preparatory to the establishment of a Collaborative Research Support Program. For this purpose the JRC will identify a roster of possible planning entities. A.I.D. may award a contract or contracts to one or more qualified entities for providing assistance in the planning process. A.I.D., in consultation with the BIFAD and JRC, will design the planning contract in a manner calculated to insure maximum participation in planning and research by all qualified institutions and to avoid organizational conflicts of interest. The purpose of the planning contract would be to provide a delineation of the problem, an outline of a research program to address the problem (in detail or in general terms, as may be appropriate), and identification of institutions which might become actively engaged in the research program.

As the initial step of the planning process the planning entity will be required to identify all other eligible institutions and individuals who should be brought into the planning or research process. As part of this process a meeting, or a series of meetings if necessary, could be arranged for a larger group than would ultimately be involved in a Collaborative Research Support Program. This could include representation from eligible universities having an interest and capability in the subject and representatives from developing countries, International Agricultural Research Centers, A.I.D. Missions, and other research agencies. Out of this meeting would come a preliminary delineation of the problem and the identification of institutions which might become actively engaged in the program. Steps will be taken to assure that all eligible institutions, including the smaller and less-experienced, and other public and private entities having interest and scientific capacity in the problem area have an opportunity to participate in this early phase of the planning process.

A variety of techniques and instrumentalities may be used for this process of getting a proper plan developed for the Collaborative Research Support Program. These techniques will vary according to the nature of each specific situation, and they will range from those where the planning entity will not be allowed to be a participant in the CRSP to those where the

planning entity will be encouraged to be a participant in the CRSP. When the latter technique is utilized, it will be necessary to provide adequate safeguards against "organizational conflicts". Such instances would include cases where adequate exploratory work had been done in advance of the planning contract so that the state of the art of the subject is well known, and the universe of university capability and interests in participation has been clearly defined, and/or where competency is otherwise lacking to assist in the planning process. Needed safeguards would include but not be limited to arrangements to assure that eligible institutions other than those involved directly in the planning contract, and having scientific capacity in the problem areas and interest in collaborating in the program, would have an opportunity to participate in this early phase of the planning process and to be considered for participation in the Collaborative Research Support Program.

In some instances, the responsibility for coordinating the planning function might be given to a single university (one which does not have a primary interest in participating in the research program), or a consortium of such universities. In other instances, it might be given to an organization such as the Sea Grant Association which could coordinate the efforts of all interested and eligible universities.

When the planning process for a Collaborative Research Support Program has been completed, a proposal or proposals would be submitted to the JRC for consideration as basis for its recommendations to the Board.

At an appropriate stage in the planning process, the JRC would make recommendations to the Board for its consideration and possible recommendations to A.I.D.

The decision whether to make a grant or contract, the choice of the grantee or contractor and the terms of the grant or contract are matters to be decided by A.I.D. with the advice of the BIFAD.

University representatives of the JRC or BIFAD will disqualify themselves from participation in decisions or recommendations of those bodies that directly affect the interests of their universities.

When the entity for a Collaborative Research Support Program grant has completed the process, a proposal will be submitted to the JRC for consideration and approval before being recommended to the Board. Essential features of a grant proposal are as follows:

- (1) A master plan for the entire Collaborative Research Support Program Grant. This should include a state-of-the-arts review.
- (2) Project statements from each participating entity, including a description of collaborative relationships with developing country and other institutions.
- (3) A plan to show how the Collaborative Research Program will be coordinated, including the management of the funds provided by the grant, as an integral part of the total research effort.
 - (a) The involved universities will unite in a legally defined corporation or special consortium, or
 - (b) One institution will be designated as the lead institution which will accept a Support Grant that will be subdivided by sub-grants and/or contracts to the cooperating institutions.
- (4) Program and fiscal accountability:
 - (a) Individual project contributions by collaborating institutions to the program as well as program progress will be evaluated periodically by the PRC for recommendation to the management entity.
 - (b) Annual project summaries will be submitted by the cooperating universities for review by the PRC.
 - (c) Evaluation plans laying out critical steps in the research process and appropriate progress measuring devices will be developed.
 - (d) Expenditures will be subject to audit in accordance with FMC-73-8 entitled "Cost Principles for Educational Institutions" and other applicable regulations.
 - (e) Forward funding decisions will be made by A.I.D., keeping in mind the need for a two-year lead time.

- (f) A.I.D. may monitor all aspects of a Collaborative Research Program and may require such reports as are deemed necessary.

Characteristics of Collaborative Research Support Program Grants

- (1) Collaborative Research Support Grants will be approved for periods of up to five years with forward funding assured for three and more years. These grants will be reviewed annually with regard to a rolling five-year plan and budget, subject to the statutory requirements for "termination for the convenience of the government".
- (2) The principle of "jointness" between the U.S. universities and A.I.D. in conceptualization and management of each Collaborative Research Support Program should be the standard test in evaluating the proposal. "Jointness" should be demonstrable through specific indication in the proposal of commitment by each U.S. university. Commitment will be tested by whether the A.I.D. component is additive to on-going university research programs and whether the total university effort toward the solution of international food problems exceeds the amount funded by A.I.D.
- (3) All grants, sub-grants and contracts entered into by the management entity shall be in accordance with criteria to be developed jointly by the Board and A.I.D.