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A.I.D. Project No. 635-0219

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PROJECT GRANT AGREEMENT

Between The

REPUBLIC OF THE GAMBIA

And The

UNITED STATES OF AMERICA

For The

Agricultural Research and Diversification Project

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A.I.D. Project No. 635-0219

PROJECT GRANT AGREEMENT

Date:

Between

The Republic of The Gambia ("Grantee")

and The United States of America, acting through the Agency
for International Development ("A.I.D.").

Article 1: The Agreement

The purpose of this Agreement is to set out the understandings of the parties named above ("Parties") with respect to the undertaking by the Grantee of the Agricultural Research and Diversification Project (the "Project") described below, and with respect to the financing of the Project by the Parties.

Article 2: The Project

SECTION 2.1. Definition of Project - The Project, which is further described in Annex 1, will assist in testing and adapting improved crop and livestock technologies which are relevant to the needs and circumstances of Gambian farmers and will expand and diversify the agricultural economy of The Gambia. In collaboration with the extension service of the Government of The Gambia, private voluntary organizations and the commercial private sector, the Project will also promote the adoption of such technologies.

Annex 1, attached, amplifies the above definition of the Project. Within the limits of the above definition of the Project, elements of the amplified description stated in Annex 1 may be changed by written agreement of the authorized representatives of the Parties named in section 8.2, without formal amendment of this Agreement.

SECTION 2.2. Incremental Nature of Project - (a) A.I.D.'s contribution to the Project, estimated at U.S. Dollars 18.0 million, will be provided in increments, the initial one being made available in accordance with Section 3.1 of this Agreement. However, subsequent increments will be subject to the availability of funds to A.I.D. for this purpose, and to the mutual agreement of the Parties, at the time of a subsequent increment, to proceed. (b) Prior to the Project Assistance Completion Date stated in this Agreement, A.I.D., based upon consultation with the Grantee, may specify in Project Implementation Letters appropriate time periods for the utilization of funds granted by A.I.D. under an individual increment of assistance.

Article 3: Financing

SECTION 3.1. The Grant - To assist the Grantee to meet the costs of carrying out the Project, A.I.D., pursuant to the Foreign Assistance Act of 1961, as amended, agrees to grant the Grantee under the terms of this Agreement an amount not to exceed Three Million Nine Hundred Sixty Thousand United States ("U.S.") dollars (\$3,960,000) ("Grant").

The Grant may be used to finance foreign exchange costs, as defined in Section 6.1., and local currency costs, as defined in Section 6.2, of goods and services required for the Project.

SECTION 3.2. Grantee Resources for the Project

- (A) The Grantee agrees to provide or cause to be provided for the Project all funds, in addition to the Grant, and all other resources required to carry out the Project effectively and in a timely manner.
- (B) The resources provided by the Grantee for the Project over its seven-year life will be not less than the equivalent of U.S. \$1,542,000 including costs borne on an "in-kind" basis.

SECTION 3.3. Project Assistance Completion Date

- (A) The Project Assistance Completion Date ("PACD") which is June 30, 1992, or such date as the Parties may otherwise agree to in writing, is the date by which the Parties agree that all services financed under the Grant will have been performed and all goods financed under the Grant will have been furnished for the Project as contemplated in this Agreement.
- (B) Except as A.I.D. may otherwise agree in writing, A.I.D. will not issue or approve documentation, which would authorize disbursement of the Grant for services performed prior to the PACD or for goods furnished for the Project, as contemplated in this Agreement, subsequent to the PACD.
- (C) Requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, are to be received by A.I.D. or any bank described in Section 7.1 no later than nine (9) months following the PACD, or such other period as A.I.D. agrees to in writing. After such period, A.I.D., giving notice in writing to the Grantee, may at any time or times reduce the amount of the Grant by all or any part thereof for which requests for disbursement, accompanied by necessary supporting documentation prescribed in Project Implementation Letters, were not received before the expiration of said period.

Article 4: Conditions Precedent to Disbursement

SECTION 4.1. First Disbursement

- (A) Prior to any disbursement under the Grant, or to the issuance by A.I.D. of any commitment documents under the Project Agreement, the Grantee shall, except as the Parties may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., a statement of the names of the persons holding or acting in the office of the Grantee specified in Section 8.2, and a specimen signature of each person specified in such statement.
- (B) Prior to any disbursement under the Grant, or to the issuance by A.I.D. of any commitment documents under the Project Agreement to finance project costs other than for technical assistance, the Grantee shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D.:
 - (1) A detailed written plan of the Grantee's interim administrative and management structure under the Project which will be effective until a permanent agricultural research management system is established and made operational; and
 - (2) The names of the representatives of the Grantee who will have authority to approve project activities and expenditures and the name of the representative of the Grantee who will serve as a counterpart to the chief of party of the technical assistance contractor and will be responsible for daily liaison among the Grantee, A.I.D. and the technical assistance contractor.

SECTION 4.2. Subsequent Disbursement

- (A) Prior to any disbursement under the Grant, or to the issuance of any commitment documents under the Project Agreement to finance project costs incurred on or after April 1 of each year commencing in 1986, other than for technical assistance, the Grantee shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., a detailed plan of research, promotional and extension activities to be carried out by the Grantee under the Project during the succeeding twelve months, including financial, administrative and operational plans and procedures for such activities.
- (B) Prior to any disbursement under the Grant, or to the issuance of any commitment documents under the Project Agreement after December 31, 1986 for project costs other than for technical assistance, the Grantee shall, except as

A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., a detailed plan of the permanent structure of the Grantee's agricultural research management system, including financial, administrative, and operational plans and procedures.

- (C) Prior to any disbursement under the Grant, or to the issuance of any commitment documents under the Project Agreement after June 30, 1988 for project costs other than for technical assistance, the Grantee shall, except as A.I.D. may otherwise agree in writing, furnish to A.I.D., in form and substance satisfactory to A.I.D., evidence that the permanent structure of the Grantee's agricultural research management system has been established and is operational.

SECTION 4.3. Disbursement to Finance Local Costs - Prior to any disbursement under the Grant, or to the issuance of any commitment documents by A.I.D. under the Project Agreement to finance local costs, the responsible A.I.D. officer shall have made the programming determinations required under A.I.D. Handbook 1, Supplement B, Chapter 18A1C.

SECTION 4.4. Notification - When A.I.D. has determined that the conditions precedent specified in Sections 4.1, 4.2, or 4.3 have been met, it will promptly notify the Grantee.

SECTION 4.5. Terminal Dates for Conditions Precedent - If all the conditions specified in Section 4.1 have not been met within 120 days from the date of this Agreement, or such later date as A.I.D. may agree to in writing, A.I.D., at its option, may terminate this Agreement by written notice to the Grantee.

ARTICLE 5: Special Covenants

SECTION 5.1. Grantee Contribution to Operational Costs - The Grantee agrees to provide on an annual basis, in accordance with the financial plan in Annex 1, or as the parties may otherwise agree in writing, funds sufficient to finance an increasing proportion of operational costs for research under the Project, towards the goal of financing one hundred percent (100%) of such costs by the beginning of the final year of the Project.

SECTION 5.2. Personnel Trained Under the Project - The Grantee agrees to ensure that all personnel trained under the Project will be appointed to established positions in research or extension which are commensurate with their newly acquired skills on or prior to the conclusion of their training.

SECTION 5.3. Use of Commodities and Structures Under the Mixed Farming Project (635-0203) - The Grantee agrees to grant to the technical assistance contractor and A.I.D. the use of all equipment, vehicles, houses and office space provided under the Mixed Farming Project (635-0203) when that project terminates or ceases to make use of such commodities or structures.

SECTION 5.4. Project Evaluation - The Parties agree to establish an evaluation program as part of the Project. Except as the Parties otherwise agree in writing, the program will include, during the implementation of the Project and at one or more points thereafter: (a) an evaluation of the progress towards the objectives of the Project; (b) identification and evaluation of problem areas or constraints that may inhibit attainment of such objectives; (c) assessment of how evaluation results may be used to help overcome such problems or constraints; and, (d) evaluation, to the degree feasible, of the overall development impact of the Project.

Article 6: Procurement Source

SECTION 6.1. Foreign Exchange Costs - Disbursement pursuant to Section 7.1 will be used exclusively to finance the costs of goods and services required for the Project having, with respect to goods, their source and origin, and with respect to services, their nationality in the Republic of The Gambia or in countries included in A.I.D. Geographic Code 941 as in effect at the time orders are placed or contracts entered into for such goods or services ("Foreign Exchange Costs"), except as A.I.D. may otherwise agree in writing, and except as provided in the Project Grant Standard Provisions Annex, Section C.1 (b) with respect to marine insurance and Section C.1 (c) with respect to motor vehicles. Ocean transportation costs will be financed under the Grant only on vessels under flag registry of The Republic of The Gambia or countries included in A.I.D. geographic code 941 except as A.I.D. may otherwise agree in writing.

SECTION 6.2. Local Currency Costs - Disbursement pursuant to Section 7.2 will be used exclusively to finance the costs of goods and services required for the Project having their source and, except as A.I.D. may otherwise agree in writing, their origin in the Republic of The Gambia ("Local Currency Costs").

Article 7: Disbursement

SECTION 7.1. Disbursement for Foreign Exchange Costs

- (A) After satisfaction of conditions precedent, the Grantee may obtain disbursement of funds under the Grant for the Foreign Exchange Costs of goods and services required for the Project in accordance with the terms of this Agreement by such of the following methods as may be mutually agreed upon:
1. by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, (a) requests for reimbursement for such goods or services, or (b) requests for A.I.D. to procure commodities or services in the Grantee's behalf for the Project; or
 2. by requesting A.I.D. to issue Letters of Commitment for specified amounts (a) to one or more U.S. banks,

satisfactory to A.I.D., committing A.I.D. to reimburse such bank or banks for payments made by them to contractors or suppliers, committing A.I.D. to pay such contractors or suppliers, under Letters of Credit or otherwise, for such goods or services, or (b) directly to one or more contractors or suppliers, committing A.I.D. to pay such contractors or suppliers, through Letters of Credit or otherwise, for such goods or services.

- (B) Banking charges incurred by the Grantee in connection with Letters of Commitment and Letters of Credit will be financed under the Grant unless the Grantee instructs A.I.D. to the contrary. Such other charges as the Parties may agree to may also be financed under the Grant.

SECTION 7.2. Disbursement for Local Currency Costs

- (A) After satisfaction of conditions precedent, the Grantee may obtain disbursements of funds under the Grant for Local Currency Costs required for the Project in accordance with the terms of this Agreement, by submitting to A.I.D., with necessary supporting documentation as prescribed in Project Implementation Letters, requests to finance such costs.
- (B) The local currency needed for such disbursement may be obtained: (1) by acquisition by A.I.D. with U.S. dollars by purchase, or (2) by A.I.D., (a) requesting the Grantee to make available local currency for such costs, and (b) thereafter making available to the Grantee through the opening or amendment by A.I.D. of special Letters of Credit in favor of the Grantee or its designee, an amount of U.S. dollars equivalent to the amount of local currency made available by the Grantee, which dollars will be utilized for procurement from the United States under the appropriate procedures described in Project Implementation Letters.
- (C) The U.S. dollar equivalent of the local currency made available hereunder will be, in the case of subsection (B) (1) above, the amount of U.S. dollars required by A.I.D. to obtain the local currency, and in the case of subsection (B) (2) above, an amount calculated at the rate of exchange specified in the applicable special Letter of Credit Implementation Memorandum hereunder as of the date of the opening or amendment of the applicable special Letter of Credit.

SECTION 7.3. Other Forms of Disbursement - Disbursements of the Grant may also be made through such other means as the Parties may agree to in writing.

SECTION 7.4. Rate of Exchange - Except as may be more specifically provided under Section 7.2, if funds provided under the Grant are introduced into the Republic of The Gambia by

A.I.D. or any public or private agency for purposes of carrying out obligations of A.I.D. hereunder, the Grantee will make such arrangements as may be necessary so that such funds may be converted into currency of The Republic of The Gambia at the highest rate of exchange which, at the time the conversion is made, is not unlawful in the Republic of The Gambia.

Article 8: Miscellaneous

SECTION 8.1. Communications - Any notice, request, document or other communication submitted by either Party to the other under this Agreement will be in writing or by telegram or cable, and will be deemed duly given or sent when delivered to such party at the following addresses:

To the Grantee:

MAIL ADDRESS:

Ministry of Agriculture
Central Bank Building
Banjul, The Gambia

Alternate Address for Cables: MINAGRIC
Banjul, The Gambia

To A.I.D.:

MAIL ADDRESS:

American Embassy
Banjul, The Gambia

Alternate Address for Cables:

AMEMBASSY BANJUL

All such communications will be in English, unless the parties otherwise agree in writing. Other addresses may be substituted for the above upon the giving of written notice.

SECTION 8.2 - Representatives - For all purposes relevant to this Agreement, the Grantee will be represented by the individual holding or acting in the Office of Minister of Agriculture, and A.I.D. will be represented by the individual holding or acting in the Office of AID Representative, U.S.A.I.D./Gambia, each of whom, by written notice, may designate additional representatives for all purposes other than exercising the power under Section 2.1 to revise elements of the amplified description in Annex 1. The names of the representatives of the Grantee, with specimen signatures, will be provided to A.I.D., which may accept as duly authorized any instrument signed by such representatives in implementation of this Agreement until receipt of written notice of revocation of their authority.

SECTION 8.3 Standard Provisions - A "Project Grant Standard Provisions Annex" (Annex 2) is attached to and forms part of this Agreement.

SECTION 8.4 Language. - This Agreement is prepared in English only.

IN WITNESS WHEREOF, the Grantee and the United States of America, each acting through its duly authorized representative, have caused this Agreement to be signed in their names and delivered as of the day and year first above written.

UNITED STATES OF AMERICA

By: Thomas R. Mahoney
Thomas R. Mahoney

June 29, 1985

Title: Acting A.I.D. Representative,
U.S.A.I.D./Gambia

REPUBLIC OF THE GAMBIA

By: S. S. Sisay
Sheriff S. Sisay



ANNEX I

I. PROJECT DESCRIPTION

A. Project Goal and Purpose:

The long-term goal of the Project is to achieve food self reliance in The Gambia. The Project will be instrumental in increasing the production of food and cash crops which is the most essential element in achieving this goal. This initial seven year project is the first phase of a planned fifteen to twenty year commitment by AID to improve agricultural research and production in The Gambia.

The Project's purpose is to test, adapt and promote the adoption of improved crop and livestock technologies that meet farmers' needs and expand and diversify Gambia's agricultural economy. Conditions indicating that the Project purpose has been achieved would include: (1) research policies/priorities being established, research programs being reviewed, and resources being allocated accordingly; (2) on-station research being conducted which draws on innovations developed in national, regional, and international organizations and which has potential results in terms of acceptance by farmers; (3) on-farm research activities being conducted which identify farmer constraints and opportunities and test improved agricultural technologies; and (4) improved technologies from research being promoted through the Extension Service, PVO's and the private sector resulting in their adoption by the rural population.

B. Project Strategy:

The Project will give priority attention to the strengthening of the agricultural research system. This represents the most cost-effective means of producing research results in the medium and longer terms. There is no adequate substitute for a strong national adaptive research system capable of continuing to refine existing improved technologies and identify new prospects from the body of research results available worldwide.

Notwithstanding the emphasis on institutionalization it is expected that substantial attention will be given to producing research results and ensuring that research results are extended to farmers. Within the research system, major emphasis will be given to the expansion and strengthening of Farming Systems Research and Extension (FSR/E) activities aimed at identifying, testing and extending improved technologies to farmers in collaboration with the Extension Service and Private Voluntary Organizations (PVOs). FSR/E is an approach designed to link the research system to its clients and to accelerate the process by which relevant technologies are identified and eventually utilized by agricultural producers. FSR/E in collaboration with the enhanced component research programs must produce results to gain the necessary recognition and acceptance, and ensure the longer run effectiveness and survival of the agricultural research system. The Project will retain

the production of research results as a major objective and allocate resources accordingly.

The process of ensuring that research results are extended effectively to farmers is equally important. In the first instance, the Project's strategy is clearly to design its activities in close consultation with similar activities or other donors and seek collaboration and complementarity. By so doing, it is assumed that these projects will be successful at least in providing the necessary resources for a functioning extension service and input delivery system. This will not be sufficient, however, to assure that promotional activities are planned and implemented effectively across a broad spectrum of new technologies. A streamlined and better supported Extension Service, though necessary, must still be given tools, guidance, and impetus, and the Project is intended to produce those.

In addition to the linkages built into the FSR/E activities, the Project will organize and support specific efforts that introduce new cultivation and husbandry techniques and varieties to farmers at large, as delivered and monitored by the Extension Service and PVOs. These institutions cannot be expected, at least in the early stages of the Project, to have the professional capacity to plan and carry out such varied and complex activities. Therefore, the Project will take promising innovations as they emerge from research efforts and design promotional campaigns for them, train extension workers in their technical details, and establish reporting and feedback systems.

In sum, the Project's strategy is a two-pronged effort involving: (1) the long-term institutionalization of an effective, applied agricultural research system, and (2) the development, promotion, and adoption by farmers of improved agricultural technologies as early as possible. Institutionalization is necessarily a long-term process and this initial seven year project is the first phase of a planned long-term commitment by AID to improve agricultural research in The Gambia. However, the Project's short- to medium-term objectives are to develop rapidly improved technologies and ensure their promotion and adoption by farmers. In the first year of the Project, therefore, it is planned that the emphasis will be on testing improvements on groundnuts, maize, and rice where the outlook for a major impact on production in the medium-term is brightest. Simultaneously, efforts will begin towards identifying improvements in sorghum, millet, grain legumes, and small ruminant production where short-term prospects may be less promising.

C. Project Outputs:

It is intended that the major outputs from the Project of an institutional nature will be (1) the establishment and effective operation of an Agricultural Research Management Systems (ARMS), (2) the expansion and integration of FSR/E activities as a

recognized and valued component of research and extension in The Gambia, (3) component research programs which are adequately staffed and funded, (4) strong, effective linkages between research and extension, and (5) effective promotion campaign plans and operations.

The results of these efforts and institutional developments are expected to be in the form of a flow of research results from component, on-station programs, through FSR/E, on-farm trials, and tests with farmers and extension workers, to promotion and acceptance of promising technologies among farmers generally. Adoption of improved technologies should result in increases in production for several of the major crops both through acreage expansion, yield improvements and loss reduction. New commodities will also be identified, tested and promoted, aimed at improving incomes, nutrition and export earnings (and/or reducing imports).

D. Project Elements:

It is planned that the Project will consist of five distinct but mutually supportive components as follows:

1. Establishment of ARMS

A primary focus of effort during the first phase of the Project will be the design and establishment of the agricultural research management system (ARMS). Plans are being made for the possible structure and operations of such a system, but its precise configuration and responsibilities will be defined following the initiation of the Project. The Government of the Gambia (GOTG) has agreed to the establishment of an Interim Project Committee (IPC) which will carry out the functions of the ARMS until the latter is formally constituted. As the main administrative body within the broader agricultural research management system, a National Agricultural Research Board (NARB) composed of representatives of clients of research, namely policy makers and producers, will be organized. The Ministries of Agriculture, Water Resources and Environment, and Planning and Economic Development, at the Permanent Secretary level, will be represented. In addition, the Gambian Produce Marketing Board (GPMB) and the Gambia Cooperative Union (GCU) will be represented. The Board will define research priorities and review research programs submitted (via a Technical Secretariat), by the various departments concerned with agricultural research. Recommendations on Project priorities and funding will be made to the concerned ministries.

The NARB will be served by a Technical Secretariat composed of representatives of the various research services which will perform the staff work for the Board. The institutional location of the Secretariat remains to be determined, but in any event, the Technical Secretariat must not be seen as primarily representing the interests of a single department or discipline.

Proposals for specific agricultural research activities will emanate from research programs operating under the departments. Representation in the research programs will encompass different disciplines and different departments as appropriate to the concerns of the specific research program.

Proposals will be submitted to NARB through the department responsible for the research program. Proposals will be required to indicate the relevance of the research to national priorities and to Gambian farming conditions and problems. As such the proposals will be required to reflect the results of FSR/E investigations/surveys as part of the rationale for the specific research project and to indicate the program of on-station and on-farm activities which will lead to utilization of the results by farmers.

Primary responsibility for the design and implementation of ARMS will rest with senior officials in the GOTG. To assist the process of establishing ARMS, approximately fifty percent of the time of the Contractor's Chief of Party will be devoted to this during the initial years of the Project. In addition, the Ministry of Agriculture has requested the assistance of the International Service for National Agricultural Research (ISNAR). Such assistance will be funded by the Project and will take the form of one person month of consultancy services per year for the duration of the Project, and include training of Gambians in agricultural research management, and general capacity building in the management field.

As ARMS becomes operational, it is intended decisions on the allocation of funds available under the Project will increasingly be made by this system.

2. Research Support Services and Training

a. Research Support Services

The GOTG's Program Planning and Monitoring Unit (PPMU) was established to provide support services to the Ministries of Agriculture, and Water Resources and Environment. While most of PPMU's services support development activities in those Ministries, some of the services also support research. These latter include (1) the national agricultural sample survey, (2) micro and technical policy studies, and (3) a library. The first two help the ministries determine research priorities, while the third directly supports researchers.

The Project will provide limited support to all of these, primarily in the form of short-term trainers/advisors and training. During the latter half of the Project, long-term technical assistance in socioeconomics may increase by virtue of a possible shift in team leadership to either the crop agronomist or livestock specialist positions. The socioeconomist would then divide his or her time between FSR/E and component research activities in socioeconomics.

The Project will improve Gambian biological research by providing a short-term trainer/advisor in biometrics or experimental statistics in sample design and analytical techniques. This consultation service will assist researchers across the full range of crops and animal programs and be provided when research programs are in the design phase. The Project will support the training of a Gambian to the MS level in biometrics at the home department of the faculty member providing the in-country training. This link of training to short-term consultancies will increase the probability that the training is relevant, well targeted, and lead to long-term ties between the University department and the Gambian research system.

Efficient management of research stations is critical to permit researchers to proceed with their programs. The Project will support visits by Yundum and Sapu personnel to appropriate stations in Africa and the U.S. Short-term trainer/advisor assistance will be obtained from those same sources.

b. Training

(1) Short-term Training

The Project has made provision for sharing the costs of a regional Farming System Support Project (FSSP) training officer based in The Gambia, who will combine coordination of all training activities under the Project with regional training and networking duties for FSSP

The major emphasis will be on in-service training, both local and external. Approximately one hundred short-term training programs to be conducted both in the U.S., Africa, and other countries have been budgeted for in the Project.

Both research and selected Extension staff will be trained in FSR/E concepts and methodology. The Gambia College may be used to provide some of this training. The Project will also support efforts to increase skills in agricultural research management and administration via a series of workshops/seminars organized by the Gambian Management Development Institute (MDI) as part of the introduction of ARMS.

It is planned that short-term external training will comprise special courses and workshops at IARC's and other institutions located in third countries, and individually designed programs of research and course work at U.S. universities lasting up to eighteen weeks (one semester). The latter will be part of a two-way flow of personnel between U.S. universities and The Gambia; thereby, staff members and advanced graduate students from participating U.S. institutions will provide consultancy support to the Project with special emphasis upon advisory assistance to Gambian researchers on research methodology across a range of disciplines.

Because institutionalization is a major objective of the Project, it is planned that all research activities supported under the Project will have Gambian leadership or at least substantial Gambian responsibility and participation. Long-term technical assistance and short-term advisors/trainers will be provided, inter alia, in crop agronomy, horticulture, forage agronomy, socioeconomics, animal production, agroforestry, and irrigated farming systems. As a rule, technical assistance will focus upon the training, advising, and institutionalization functions rather than upon carrying out research except, rarely, where Gambian expertise does not yet exist or is insufficient.

Where a short-term trainer/advisor is provided, this will be in the context of a long-term plan. A typical pattern will involve the pairing of a Gambian researcher with an appropriate faculty member(s) from a U.S. university. The faculty member will schedule a series of short-term visits to help plan research, monitor progress, advise on problem resolution, and assist with analysis. The Gambian researchers will make one or more short-term training visits to the home department of that faculty member to work alongside researchers engaged in relevant activities and attend courses.

(2) Long-term Training

Provision has been made for a total of eight BS and nine MS degree programs under the Project. Post masters course work and research experience are desirable in some fields such as agronomy and will be funded by the Project.

3. Support for On-Station/Component Research

It is planned that the Project will provide technical assistance, training, and operating cost support to component research primarily in crops and livestock during the life of the Project. Sustainability and relevance to national priorities, policy objectives, and farm level needs as revealed through FSR/E activities will be major criteria in selecting on-station research activities. ARMS will provide the mechanism by which resources under the Project will be allocated in support of component research currently carried out by the various departments in the two ministries.

Criteria for support will be (a) evidence that the proposed line of research has potential results in terms of acceptance by farmers, and (b) that the same line of research has been successful in other countries in the region. In general, it is not felt that the Gambian agricultural research system has a comparative advantage in carrying out path breaking research into subjects that have not experienced significant breakthroughs elsewhere under comparable ecological conditions. To an important degree this should apply to agroforestry, for example. Efforts will be made, especially during the early years of the Project, to obtain information on research and

development activities which have yielded promising results elsewhere in the region. In the process, the Project will seek to expand and strengthen the links between the national research system and research activities elsewhere. These linkages will provide a continuing source of ideas and materials for adaptation by the agricultural research system for use in The Gambia.

The ARMS will set annual research priorities for Agriculture. These priorities will govern the use of AID and GOTG contribution to research under this project as well as other donor contributions provided under other programs. Nevertheless, under this Project, AID's separable contributions to on-station research, such as long-term technical assistance or a continued supply of seeds for varietal testing of a particular crop, will be focussed on three to four major food crops. AID's contributions to the research systems management structure and operations, to on-farm adaptive research in the farming systems context, and to networking will cover groundnuts, horticultural crops, swamp rice and other priorities identified by ARMS in addition to the three to four major food crops. Separable contributions for on-station research on crops other than the three to four major food crops will come from other donors and the GOTG research budget.

In addition to research expenses such as equipment, vehicles, and operational support (petrol, inputs, etc.), it is planned that the Project will provide for 14 person year of long-term technical assistance and training in support of component research. In addition, short-term consultancies of approximately six weeks each will provide advisory assistance in component research to Gambian researchers.

a. Cereals, Oilseeds and Grain Legumes:

It is expected that support from the Project will include various forms of assistance to on-station and on-farm research in The Gambia, such as long- and short-term training, technical assistance, commodity research, and operating costs support. It is planned that two Gambians will be trained to the MS level and additional staff to the BS level. Long-term technical assistance will include one long-term senior cropping systems agronomist at the onset of the Project and research associates in agronomy during the middle and latter phases of the Project. Efforts to improve these major commodities in Gambian farming systems are expected to provide the principal sources of benefits from the Project. Research priorities for component research on crops will be strongly influenced by the results of FSR/E activities. This will be facilitated by the participation of researchers responsible for on-station research in these commodities in FSR/E activities and utilization of the FSR/E structure for on-farm trials. A major focus will be screening of varieties using both local entries and improved varieties which have done well in similar ecological zones such as Senegal and Nigeria.

Efforts will also continue on improved agronomic practices including increasing labor productivity during peak labor periods and intercropping.

b. Irrigation Systems:

The Project will undertake a design study to assess the feasibility of alternatives for the rehabilitation of small-scale irrigation perimeters. The primary objective will be to develop a system which is compatible with the existing farming systems, sustainable by the local economy, and supportable by available water resources.

c. Animal Traction:

The Project will make use of results from worldwide research to identify additional low cost equipment for use in The Gambia. Training and short-term technical assistance will be provided in addition to support to maintain and expand contacts with animal traction research and development projects throughout the region.

d. Soil/Crop and Water Balances:

The Project will try to link existing soil/crop and water balance these activities to one another and to FSR/E and component research activities. Special attention will be given to (1) the analysis of fertilizer trials conducted to date and the correlation of results with soil types, (2) improved methods of land preparation, and (3) soil/crop/water balance studies. It is intended that support to these activities will include (1) providing the soils laboratory at Yundum with the necessary equipment and materials required for soil testing and plant analysis, (2) assisting the soils survey unit in the Department of Agriculture to provide detailed soil maps of the main research stations and on-farm trial areas, (3) provision of training to the MS level for one Gambian in soil physics, and (4) provision of short-term trainers/advisors.

e. Crop Protection:

Special attention under the Project will be on facilitating the involvement of the Gambian Crop Protection Service (CPS) staff in FSR/E work. Component research will have a crops and farming systems focus rather than a disciplinary orientation, and support for training will also be provided.

f. Livestock:

Research to benefit the livestock sector will include technical assistance for research programs in crop residues, fallow land pastures, small domestic ruminants, poultry, feeding trials, overseeding legumes in rice, and living fences. This technical assistance will be a combination of short- and

medium-term, Some of the activities such as feeding of crop residues, fallow land pastures, and methods of harvesting and storing forages, will be a continuation of ongoing MFP work. For other activities, where the potential benefits are not yet clear, initial technical assistance team activities will be aimed at clarifying those potentials in consultation with expatriate and Gambian researchers and designing the longer-term research programs. These activities include range management, poultry, and small ruminant research.

4. On-Farm Research: Farming Systems Research and Extension (FSR/E):

In order to generate technologies which are relevant to farmers' needs and circumstances, the Project will undertake a series of activities which have become known as farming systems research and extension (FSR/E).

It is planned that the Project will fund and direct a series of reconnaissance and special studies as part of the FSR/E activities during 1985 and early 1986. These studies will be carried out in collaboration with MFP and selected departments and are expected to result in the following: (a) preparation of a series of monographs on Gambian farming systems utilizing data from the Mixed Farming Project, Gambia River Basin Studies (OMVG) and the Land Resources Study (LRS); (b) zoning of farming systems in The Gambia; and (c) special surveys focussing on such issues as markets for horticultural crops, agroforestry practices, nutrition, and small irrigated systems which are required to provide guidance for future research activities.

During 1985, the Project team and the GOTG are expected to expand the membership of the Sapu-based FSR/E team and organize a second team to operate out of the Yundum Research Station to cover the western portion of the country. The membership of these teams will be primarily Gambian from the onset. Long-term technical assistance will be provided to each regional team in the form of a Research Extension Liaison Officer (RELO) on a full-time basis for approximately three years. Approximately fifty percent of the Chief of Party's time will be devoted to participation in FSR/E activities in the western portion of the country. In addition to the basic two-team structure, a third group will be formed during 1985 specifically focussed upon irrigated systems with the task of developing a detailed proposal for constructing and/or rehabilitating small irrigated perimeters. This irrigation systems group will participate in the monitoring, evaluation and adaptive research activities in support of small and large irrigated schemes in the country.

FSR/E teams will be multidisciplinary and interdepartmental, although funds for support will flow through one department. Special efforts will be made to avoid dominance of FSR/E activities by a single discipline or department. The core team will consist of three or four researchers in crop agronomy,

animal production/nutrition/health, extension and social science. The core team will be part of a larger FSR/E group composed of representatives of other disciplines, such as agroforestry, crop protection, and agricultural engineering. FSR/E reports will be reviewed by the Technical Secretariat of the NARB to facilitate screening of research proposals and reassessing priorities.

The FSR/E regional teams will supervise two-person village teams composed of personnel from the extension services: one agricultural assistant (AA) and one livestock assistant (LA). Each village team will be responsible for the on-farm trials in one or more villages selected as representative of individual zones. The teams will also be responsible for the collection of data required to monitor the trials.

On-station research in The Gambia has identified promising technologies which have not yet been tested in farmers' fields. Pending the development of technologies based on farm-level constraints identified in the FSR/E process, technologies currently available will be used to design on-farm trials in the initial years of the FSR/E program.

Linkages between research and extension will be further consolidated during the implementation of a training and visit (T and V) system under ADPII. In addition to extension officers, it is anticipated that the proposed ADPII subject matter specialists will also participate in FSR/E activities. They will be able to use on-farm trials conducted by AA/LA teams for orientation and training of village extension workers in prospective technologies. The full range of opportunities for collaboration will be developed by the RELOs, FSSP-supported trainer and the ADPII extension specialist.

In addition, FSR/E activities are intended to give rise to a series of special socioeconomic studies under the auspices of the PPMU. Policy studies on such topics as agricultural prices and input supply will be supported with TDY technical assistance programmed in a long-term pattern. The precise nature of those studies will be influenced by the GOTG objectives, PPMU capabilities, and Ministry of Finance marco-policy studies under the USAID-supported Economic & Financial Policy Analyses Project.

5. Promotion of Technologies:

As varieties of cereals, oilseeds, grain legumes and so forth are screened and cultural practices developed, the Project will support dissemination of the results and do further testing. This will be done initially by linkages with extension activities at the research planning stage in ARMS and by participation of farmers and extension agents in all FSR/E activities. More importantly, the Project will plan in detail and train field workers for specific promotional campaigns.

It is planned that, the Project will provide two long-term

technical assistants, Research Extension Liaison Officers (RELOs), to work at the Sapu and Yundum research stations to generate promotional campaigns. They will be technical advisors to the principal agricultural officers in the western and eastern regions, and have as their major responsibility

To ensure that promising innovations reach farmers efficiently, within the limits of the Project's, GOTG's and PVOs' organizational and financial capacities. Other Project resources and facilities will be brought to bear with their assistance, especially technical training by research specialists, operational funds for selected pilot promotions, and logistical and intellectual support for major campaigns as necessary.

F. Project Inputs:

The principal AID-funded inputs are technical assistance, training, evaluation, commodities, operational costs of research and promotion activities, and construction. The principal GOTG counterpart contributions will be in the form of the GOTG personnel and operating expenses, and research and government office facilities. A review of each major input category appears below.

1. Long-term Technical Assistance

On average, for each of the seven project years there will be only three to five long-term TAs in residence, one of whom will be the Chief of Party. In total, 29.3 years of long-term TA will be provided as follows:

PLANNED GARD LONG-TERM TECHNICAL ASSISTANCE (Person Years)

Project Year	1	2	3	4	5	6	7
Chief of Party/Socio-economist	1	1	1	1	1	1	1
Admin/Financial Manager	1	0.3					
Research Extension Liaison Officer (Sapu)	0.5	1	1	0.5			
Research Extension Liaison Officer (Yundum)	1	1	1				
Training Officer (FSSP)	0.5	0.5					
Crop Agronomist	1	1	1	1	1	1	1
Horticulturist			1	1			
Forage Agronomist	0.5	0.5					
Livestock Specialist				1	1	1	1
TOTAL	5.5	5.3	5	4.5	3	3	3

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The Chief of Party will share his time among general project management, development of the new agricultural research management system, and participation on the FSR/E team at Yundum. During the first year he will be assisted by an administrative/financial advisor who will set up the admin/finance system for the Project which subsequently will be taken over by a local administrative assistance and gradually built into ARMS.

Research in crop and forage agronomy will be done with the help of two long-term TAs. A research extension liaison Officer (RELO) will be provided to each of the regional FSR/E teams for a period of three years. The other two long-term TAs at the outset will work on FSR/E training. Crop work and FSR/E work will continue. A long-term TA for livestock and one for horticulture will commence work in year three, following the preliminary investigations discussed in the Technical Analysis.

Supplementing the long-term TAs described above will be approximately nine expatriate research associates (postdoctoral researchers and advanced graduate students) working with Gambian counterparts for periods of approximately twelve to eighteen months. This will allow for more intensive activity on high priority research programs at a lower cost for well-trained expatriate researchers.

Short-term trainers/advisors will implement a series of short-term training programs. As the short-term consultants will be used primarily to carry out training and advisory functions rather than simply serve as consultants in the traditional sense, the funds for these services are budgeted under the training line item of the budget.

2. Training

The Project will support nine MS and eight BS training programs spanning a variety of disciplines. The larger part of the Project training will be devoted to a tightly designed series of short-term programs in The Gambia, the U.S., and third countries. The Gambia/U.S. components will, for the most part, be linked together, involving on-the-job training in The Gambia, follow-up training in the U.S., and subsequent on-the-job training back in The Gambia. This involves visits by U.S. experts to The Gambia and by Gambians to the U.S.

It is anticipated that the subjects to be covered in short-term training are field crop production, soil/plant/water relations, horticulture, agricultural engineering, crop protection, small ruminants, poultry, forage, biometrics, agricultural statistics, policy analysis, and management. Part of the short-term training will be done at the appropriate International Agricultural Research Centers (IARCs) as well as at specialized training institutes in Africa. The parties expect that some of the training will be done at The Gambia's Management Development Institute and the Gambia College.

3. Commodities

This category is allocated to equipment items that directly support the research program.

4. Construction

The only construction planned is for three staff houses to accommodate the TA personnel at Sapu.

5. Local Operating Costs for Research and Promotion Activities

The Project will help to alleviate the problem of inadequate operational support for local researchers and extension agents through specific recurrent cost financing. The GOTG will assume an increasing share of this in latter years of Phase I and Phase II of the Project, as increased agricultural productivity and policy reforms lead to an improved recurrent revenue situation.

II. FINANCIAL PLAN AND ANALYSIS

A. The Project Budget

The illustrative Project budget is presented in the attached financial tables. See Attachment I to this Annex I. The total cost to AID is \$18,000,000. The GOTG contribution will be \$1,542,000 equivalent, giving a total of \$19,542,000. Table 1 presents the financial plan showing the funding increments Table 2 presents a summary of the total project budget by source of funding and project inputs. Table 3 provides a summary of project costs by components and input category. Table 4 presents annual project expenditures by project components and source of funding. It is understood by the parties that the illustrative financial plan set forth in Tables 1-4 are subject to change without formal amendment of the Grant Agreement.

B. Methods of Payment and Audit.

1. Methods of Payment

Methods of financing AID/Banjul plans to use for the Project are summarized as follows:

Methods of Implementation*	Method of Financing	Approximate Amount (U.S. \$1000)
TA Title XII Contractor	Letter of Credit	4,673
Training TA Contractor	Letter of Credit	3,797
Commod-TA Contractor	Letter of Credit	1,000
Construction-TA Contractor	Letter of Credit	110
Operating Expenses	Direct Payment	
Local Proc/Purchases	Purchase Order	1,146
Evaluation - Contract	Direct Payment	250
Audit - Contract	Direct Payment	100
Indirect Cost	Direct Payment	2,552
Campus Support	Letter of Credit	598

	TOTAL	14,226

*Cost for contingency (\$1,168) and inflation (\$2,606) are not included in the table.

More detailed disbursement procedures or plans will be set forth in Project Implementation Letters

2. Audit

It is anticipated that the GOTG Auditor General's Office will audit currency disbursements by the GOTG. Auditing of the contractor's accounts will be performed by an independent auditor. Project funds have been budgeted for this purpose.

III. IMPLEMENTATION AND PROCUREMENT PLAN

A. Implementation Arrangements and Schedule:

The detailed schedule for implementation of Project activities is shown in the attached illustrative implementation chart. See Attachment No. II to this Annex I. Major implementation arrangements are described below.

1. Grantee Implementing Agency

The primary Grantee implementing agency will be the Ministry of Agriculture. The Ministry of Water Resources and Environment will also be a recipient of Project support.

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2. Grantee Personnel

The various GOTG ministries and departments involved in the Project have agreed to make personnel available for the Project activities and training. The GOTG will be responsible for all allowances. The GOTG will guarantee a position in the sponsoring ministry for personnel undertaking degree training under the Project.

3. Project Management

The Project will be managed initially by an Interim Project Committee (IPC) consisting of the Permanent Secretaries of the Ministries of Agriculture, Water Resources and Environment, and Economic Planning and Industrial Development, the Assistant Director for Research (DOA), and Chief of Party (COP) of the TA team. The concurrence of the IPC will be required to expend funds in support of Project activities. The Assistant Director of Research (DOA) will serve as secretary to the IPC and the GOTG counterpart to the COP until ARMS has been formally established and permanent arrangements installed. The Assistant Director in consultation with the COP will act on behalf of the IPC in all routine matters affecting the Project that require GOTG authorization, such as financial arrangements, designation of trainees, and staffing schedules for short- and long-term TAs. The COP will be responsible for submitting activity/work programs every six months for review by the Committee and AID/Banjul.

AID/Banjul will assign a project officer to backstop the Project. He or she will be responsible for budgeting, implementation actions, monitoring, reporting, and obtaining necessary clearances and timely decisions from USAID. He or she will serve as liaison among USAID, GOTG, and the contractor.

4. Financial Management

It is planned that a long-term U.S. administrator/financial manager will be employed by the contractor to (a) ensure that proper Project financial management and control systems are established; (b) be responsible for strengthening financial management in the Ministry of Agriculture in collaboration with the Sahel Regional Financial Management Project; (c) provide administrative liaison among USAID, GOTG, and the contractor; (d) be responsible for local procurement of commodities and arrange for construction; and (e) select and train local administrative staff employed by the Project. Separate accounts for Project funds will be established and a system of cosignatures will be required. Funds for local currency will be channeled through the GOTG's accounting system. AID/Banjul will disburse funds for local currency operating costs on the basis of procedures defined in the Project Agreement. Payment to the TA contractor, will be made directly by

AID through a Letter of Credit. The contractor will provide sufficient detail to AID/Banjul in order for the project officer to monitor the contractor's expenditures. Specific financial procedures will be spelled out in Project Implementation Letters.

B. Procurement Arrangements and Responsibilities

1. Technical Assistance

The technical assistance will be procured via a direct contract with AID. A total of 29.3 person years of long-term TA and ten years of short-term trainers/advisors will be provided (included in the training line item of the budget).

2. Construction

It is anticipated that three staff houses will be constructed for the technical assistance personnel based at Sapu. The contractor will contract with local A&E and construction firms to undertake the construction. The REDSO/WCA engineer will approve construction plans and make periodic site visits until the construction has been completed.

3. Commodities

a. Responsible Agency

All commodity procurements for the Project will be undertaken by the contractor. AID will provide advice in procurement matters.

b. Source/Origin of Procurements

The authorized source/origin of commodities for the Project is AID Geographic Code 941 except that indigenous goods and free world shelf items may be purchased locally in accordance with Handbook 1, Supplement B, Chapter 18.

c. Delivery, Receipt and Utilization

All Project commodities imported into The Gambia will be shipped CIF Banjul. Suppliers will provide all-risk marine insurance in the amount of 120 percent of the CIF cost of the commodities and similar insurance for inland freight.

The GOTG is responsible for the proper reception and clearances of incoming Project commodities. Inspections of incoming shipments will be made, and receiving documents shall be annotated with comments on evident damages/losses. The GOTG will file claims when necessary. The contractor and the GOTG will follow AID marking requirements on all Project financed commodities.

4. Local Logistics

The following arrangements for local logistics are planned:

The Grantee agrees that all the facilities, vehicles, and equipment financed by AID under the MFP be made available to the contractor and A.I.D. to support GARD activities.

The contractor will have the use of all housing (including furnishings) now occupied by the MFP, including residences and guest houses. The Project will be given control of the Abuko facilities now occupied by MFP. These will be used until suitable facilities being built by ADPII are available at Yundum. The MFP Abuko facilities include two office blocks and a warehouse. These will be used by the Chief of Party, the crop agronomist, the forage agronomist, the livestock researcher, the FSR/E team, short-term personnel, counterparts, and the support staff. The Project also will occupy facilities at Sapu. The Project will be given control of the current MFP guest house. Office space and research space will be allocated by THE GOTG.

The Chief of Party will be allocated office space by the THE GOTG convenient for his interaction with his designated counterpart, the Assistant Director of Research. It is expected that he will occupy this office space for the time devoted to the research management system.

IV. MONITORING AND EVALUATION PLAN

A. Monitoring Activities

There will be careful monitoring of Project implementation throughout the life of the Project. The monitoring process will collect information to enable both USAID and GOTG project managers to compare reported progress against planned inputs, outputs and objectives; it will alert project management and policy makers to implementation problems requiring corrective action; and it will provide the necessary information for the preparation of Project evaluations including information on conditions and assumptions which are critical to the success of the Project.

1. AID:

In order to provide continuity and coordination within AID/Banjul, a Project Committee will be established. The Project Committee will serve as a management tool and will meet as required to review progress and assist in the resolution of implementation issues.

2. GOTG:

It is expected that the PPMU, because of its experience in monitoring Ministry of Agriculture programs, will take the lead in establishing and institutionalizing a monitoring system within the GOTG agencies responsible for Project implementation. Such a system will include an annual review of research undertaken by the Project.

3. TA Contractor:

The Chief of Party (COP) will provide AID/Banjul with quarterly progress reports on Project activities detailing Project progress and implementation problems which need to be resolved. The COP will also submit an annual report which will analyze the progress and problems for each of the main components of the Project: Agricultural Research Management System, on-farm research, on-station research, training, research support, and promotion activities.

4. Periodic Reviews:

Project implementation reviews will be conducted semi-annually by AID/Banjul during its review of agricultural projects. The PPMU will undertake quarterly reviews to identify implementation problems and recommend corrective action. After these reviews, the AID Agricultural Development Officer and/or the AID Project Officer will meet with the COP, and the Chairman of the Interim Project Management Committee (IPC) or, once established, the Agricultural Research Board, to review Project progress.

B. Evaluation Plan

1. Joint AID/GOTG Review:

Early in year two of the Project or sooner, if appropriate, a joint review will be conducted by the GOTG, AID/Banjul, and the contractor. The review will assess in detail the plan for the establishment of the Agricultural Research Management System. It will also detail the degree to which inputs have been provided efficiently and identify corrective actions as necessary. Finally, it will assess briefly the development, dissemination, and impact of new innovations since project design. Key issues to be examined will be the adequacy of the levels of technical assistance and the effectiveness of promotional/extension activities.

2. External Evaluations

It is planned that two external evaluations will take place during the life of the Project in years three and six. These will be independent evaluations, carried out by multidisciplinary teams contracted by AID/Banjul.

A key purpose of the first independent evaluation will be to assess ARMS in order to determine if it is carrying out the key functions of establishing research priorities, reviewing ongoing and proposed research activities in light of these priorities, and allocating resources for research accordingly. If the ARMS is in place, project management will move from the interim arrangement to that which has been developed as part of the ARMS.

The first independent evaluation will assess (a) the degree to which Project outputs have or can likely be achieved, including the degree to which the Project has been able to generate technologies which are being adopted by farmers, (b) whether or not sufficient quality and quantity of information is being collected to enable measurement of the Project's progress, and (c) the need for making changes in GOTG and contractor staffing, level of resources, and management arrangement for the various components of the Project. The effectiveness of promotional/extension activities being conducted by the Project and other projects also will be given special attention.

The second evaluation will be conducted approximately mid-year of year six of implementation. This final evaluation will review Project accomplishments against planned outputs and EOPS (end of project status) and identify activities which would be undertaken during a Phase II project.

The two external evaluations will require three to four external evaluators. The evaluations will be organized by AID and GOTG personnel. Each evaluation has been budgeted at approximately \$125,000. These funds will be controlled by AID/Banjul and be outside of the technical assistance contract. Detailed scopes of work for each evaluation will be developed by AID.

A n n e x I
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B u d g e t T a b l e s

Table 1
FINANCIAL PLAN SHOWING FUNDING INCREMENTS 1/

(\$ 000)

Project Inputs	Source	AID GRANT		FIRST INCREMENT 1985	FUTURE YEARS	
		FX	LC			TOTAL AID
1. Technical Assistance		4673	0	4673	1830	2843
2. Training		3797	0	3797	571	3226
International		2290	0	2290	251	2039
In-Country (Trainers/Advisors)		1507	0	1507	320	1187
3. Commodities		1000	0	1000	459	541
Vehicles		317	0	317	135	182
Other		683	0	683	324	359
4. Construction		0	110	110	110	0
5. Local Operating Costs		160	986	1146	165	981
Local Personnel		0	168	168	24	144
Research & Promotion Costs		160	818	978	141	837
6. Other costs		6754	520	7274	825	6449
Campus Support		598	0	598	94	504
Monitoring & Evaluation		250	0	250	0	250
Audit		100	0	100	0	100
Indirect Costs (Overhead)		2532	0	2532	497	2035
Contingency		1038	110	1168	234	934
Inflation		2196	410	2606	0	2606
Total		16384	1616	18000	3960	14040

Table 2
SUMMARY OF PROJECT COSTS
BY EXPENSE CATEGORY AND SOURCE OF FUNDING
(\$ 000)

Project Inputs	Source	AID GRANT		TOTAL AID	FX	BOTG		TOTAL BOTG	TOTAL
		FX	LC			LC	TOTAL BOTG		
1. Technical Assistance		4673	0	4673	0	0	0		4673
2. Training		3797	0	3797	0	0	0		3797
International		2290	0	2290	0	0	0		2290
In-Country (Trainers/Advisors)		1507	0	1507	0	0	0		1507
3. Commodities		1000	0	1000	0	0	0		1000
Vehicles		317	0	317	0	0	0		317
Other		683	0	683	0	0	0		683
4. Construction		0	110	110	0				110
5. Local Operating Costs		160	986	1146	0	981	981		2127
Local Personnel		0	168	168	0	773	773		941
Research & Promotion Costs		160	818	978	0	208	208		1186
6. Other costs		6754	520	7274	0	561	561		7835
Campus Support		598	0	598	0	0	0		598
Evaluation		250	0	250	0	0	0		250
Audit		100	0	100	0	0	0		100
Indirect Costs (Overhead)		2552	0	2552	0	0	0		2552
Contingency		1058	110	1168	0	98	98		1266
Inflation		2196	410	2606	0	463	463		3069
Total		16384	1616	18000	0	1542	1542		19542

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Table 3: Summary of Project Cost by Component and Input Source (\$ 000)

I. AG RESEARCH MANAGEMENT SYSTEM	Total AID FX	Total AID LC	Total GOTG FX	Total GOTG LC	Total AID	Total GOTG	Total
	Long Term TA	720	0	0	0	720	0
Training	184	0	0	0	184	0	184
Internat. ST Trng in Afr.	64	0	0	0	64	0	64
In-Country Trainers/Adv	120	0	0	0	120	0	120
Commodities	70	0	0	0	70	0	70
Vehicles	50	0	0	0	50	0	50
Other/Office Equipment	20	0	0	0	20	0	20
Local Operating Costs	14	399	0	14	413	14	427
Gambian Personnel	0	0	0	14	0	14	14
Local Staff	0	119	0	0	119	0	119
Office Supplies	14	21	0	0	35	0	35
Vehicle Maint/Oper	0	84	0	0	84	0	84
Rent & Utilities	0	175	0	0	175	0	175
Total	988	399	0	14	1387	14	1401
II. FSR/E & Promotion	Total AID FX	Total AID LC	Total GOTG FX	Total GOTG LC	Total AID	Total GOTG	Total
Long Term TA	1575	0	0	0	1575	0	1575
Training	188	0	0	0	188	0	188
Internat. ST Trng. IARCs	176	0	0	0	176	0	176
In-Country Trainers/Adv	12	0	0	0	12	0	12
Commodities	90	0	0	0	90	0	90
Vehicles	90	0	0	0	90	0	90
Local Operating Costs	146	324	0	401	470	401	871
Gambian Personnel	0	0	0	343	0	343	343
Local Staff	0	35	0	0	35	0	35
Supplies & Equip.	0	29	0	18	55	18	73
Vehicle Maint/Oper	0	80	0	40	80	40	120
Promotion grants	146	180	0	0	300	0	300
Total	1999	324	0	401	2323	401	2724

Table 3: Summary of Project Cost by Component and Input Source (\$ 000)

III. COMPONENT RESEARCH	Total AID FX	Total AID LC	Total BOTG FX	Total BOTG LC	Total AID	Total BOTG	Total
Long Term TA	2378	0	0	0	2378	0	2378
Training	3425	0	0	0	3425	0	3425
Internat ST Trng US & 3rd	901	0	0	0	114	0	901
Internat Degree Trng. US	1149	0	0	0	1149	0	1149
In-Country Trainers/Adv.	1375	0	0	0	1375	0	1375
Commodities	840	0	0	0	840	0	840
Vehicles	177	0	0	0	177	0	177
Equipment	663	0	0	0	663	0	663
Construction	0	110	0	0	110	0	110
Housing	0	110	0	0	110	0	110
Local Operating Costs	0	263	0	566	263	566	829
Gambian Personnel	0	0	0	416	0	416	416
Local Staff	0	14	0	0	14	0	14
Vehicle Maint/Oper	0	94	0	48	94	48	142
Equipment Maint/Oper	0	155	0	102	155	102	257
Total	6643	373	0	566	7016	566	7582
IV. OTHER COSTS	Total AID FX	Total AID LC	Total BOTG FX	Total BOTG LC	Total AID	Total BOTG	Total
US Campus Support	598	0	0	0	598	0	598
Evaluation	250	0	0	0	250	0	250
Audit	100	0	0	0	100	0	100
Total	948	0	0	0	948	0	948
Project							
Subtotal	10578	1096	0	981	11674	981	12655
Contingency (3.0%)	1638	110	0	98	1168	98	1246
Inflation	2196	410	0	463	2406	463	3069
Indirect Costs (Overhead)	2532	0	0	0	2532	0	2532
Total	16384	1616	0	1542	18000	1542	19542

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Table 4: Annual Project Expenditures by Component (\$ 000)

	Year 1 AID	Year 1 GOTG	Year 2 AID	Year 2 GOTG	Year 3 AID	Year 3 GOTG	Year 4 AID	Year 4 GOTG
I. AG RESEARCH MANAGEMENT SYSTEM								
Long Term TA	225		120		75		75	
Training	56	0	56	0	24	0	12	0
Internat. ST Trng in Afr.	32		32					
In-Country Trainers/Adv	24		24		24		12	
Commodities	35	0	0	0	0	0	35	0
Vehicles	25						25	
Other/Office Equipment	10						10	
Operating costs	59	2	59	2	59	2	59	2
Gambian Personnel	0	2		2		2		2
Local Staff	17		17		17		17	
Office Supplies	5		5		5		5	
Vehicle Maint/Oper	12		12		12		12	
Rent & Utilities	25		25		25		25	
Total	375	2	235	2	158	2	181	2
II. FSR/E & Promotion								
Long Term TA	375		450		375		150	
Training	44	0	32	0	32	0	32	0
Internat. ST Trng. IARCs	32		32		32		32	
In-Country Trainers/Adv	12							
Commodities	45	0	0	0	0	0	45	0
Vehicles	45						45	
Operating costs	78	49	72	52	69	55	67	57
Gambian Personnel		49		49		49		49
Local Staff	5		5		5		5	
Supplies & Equip	43		5		3	2	2	3
Vehicle Maint/Oper	30		12	3	11	4	10	5
Promotion grants			50		50		50	
Total	542	49	534	52	476	55	294	57

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Table 4: Annual Project Expenditures by Component (\$ 000)

	Year 1 AID	Year 1 GOTG	Year 2 AID	Year 2 GOTG	Year 3 AID	Year 3 GOTG	Year 4 AID	Year 4 GOTG
III. COMPONENT								
RESEARCH								
Long Term TA	341		190		392		555	
Training	471	0	688	0	760	0	617	0
Internat ST Trng US & 3rd	76		181		186		181	
Internat Degree Trng. US	111		132		271		250	
In-Country Trainers/Adv.	284		375		303		186	
Commodities	379	0	138	0	125	0	178	0
Vehicles	65				27		85	
Equipment	314		138		98		93	
Construction	110							
Housing	110							
Local Operating Costs	28	54	35	67	53	93	51	90
Gambian Personnel		51		58		80		73
Local Staff	2		2		2		2	
Vehicle Maint/Oper	16		13	3	17	5	15	7
Equipment Maint/Oper	10	3	20	6	34	8	34	10
Total	1329	54	1051	67	1330	93	1401	90
IV. OTHER COSTS								
US Campus Support	94		84		84		84	
Evaluation					125			
Audit								
Total	94	0	84	0	209	0	84	0
Project								
Subtotal	2340	105	1924	121	2173	150	1960	149
Contingency (10%)	234	11	192	12	217	15	196	15
Inflation			163	15	372	38	542	60
Indirect Costs	497	0	471	0	474	0	417	0
Total	3071	116	2750	148	3236	203	3115	224

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Table 4: Annual Project Expenditures by Component (\$ 000)

	Year 5 AID	Year 5 GOTG	Year 6 AID	Year 6 GOTG	Year 7 AID	Year 7 GOTG
I. AG RESEARCH MANAGEMENT SYSTEM						
Long Term TA	75		75		75	
Training	12	0	12	0	12	0
Internat. ST Trng in Afr.			0			
In-Country Trainers/Adv	12		12		12	
Commodities	0	0	0	0	0	0
Vehicles						
Other/Office Equipment						
Operating costs	59	2	59	2	59	2
Gambian Personnel		2		2		2
Local Staff	17		17		17	
Office Supplies	5		5		5	
Vehicle Maint/Oper	12		12		12	
Rent & Utilities	25		25		25	
Total	146	2	146	2	146	2
II. FSR/E & Promotion						
Long Term TA	75		75		75	
Training	16	0	16	0	16	0
Internat. ST Trng. IARCs	16		16		16	
In-Country Trainers/Adv						
Commodities	0	0	0	0	0	0
Vehicles						
Operating costs	64	60	62	62	58	66
Gambian Personnel		49		49		49
Local Staff	5		5		5	
Supplies & Equip	1	4	1	4		5
Vehicle Maint/Oper	8	7	6	9	3	12
Promotion grants	50		50		50	
Total	155	60	133	62	149	66

Table 4: Annual Project Expenditures by Component (\$ 000)

	Year 5 AID	Year 5 GOTG	Year 6 AID	Year 6 GOTG	Year 7 AID	Year 7 GOTG
III. COMPONENT RESEARCH						
Long Term TA	300		300		300	
Training	459	0	308	0	122	0
Internat ST Trng US & 3rd	161		58		58	
Internat Degree Trng. US	203		118		64	
In-Country Trainers/Adv.	95		132			
Commodities	20	0	0	0	0	0
Vehicles						
Equipment	20					
Construction						
Housing						
Local Operating Costs	45	83	32	85	19	94
Gambian Personnel		60		49		45
Local Staff	2		2		2	
Vehicle Maint/Oper	14	8	11	11	8	14
Equipment Maint/Oper	29	15	19	25	9	35
Total	824	83	640	85	441	94
IV. OTHER COSTS						
US Campus Support	84		84		84	
Evaluation			125			
Audit					100	
Total	84	0	209	0	184	0
Project						
Subtotal	1209	145	1148	149	920	162
Contingency (0101)	122	15	115	15	92	16
Inflation	459	83	355	112	515	155
Indirect Costs	267	0	233	0	193	0
Total	2057	242	2051	276	1720	333

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ANNEX I
ATTACHMENT II
ILLUSTRATIVE IMPLEMENTATION
SCHEDULE

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Illustrative Implementation Schedule

<u>MONTH</u>	<u>ACTION</u>	<u>RESPONSIBILITY</u>
April	- PP Submitted to AID/W	AID/Banjul
	- FSSP Workshop on OFT Planned	AID/Banjul/GOTG
May	- FSSP Workshop on OFT	AID/Banjul/GOTG
	- FSR/E Regional Teams formed	GOTG
June	- PP approved, Project authorized	AID/Banjul/AID/W
	- Project Agreement signed	AID/Banjul/GOTG
	- PIO/T Issued for Contractor	AID/Banjul/AID/W
July	- TA Contract Signed	AID/Banjul/Contractor
	- Commodities Ordered	Contractor
	- PIO/Ps prepared	GOTG/AID/Banjul
August	- TA COP and Administrative/Financial Management Specialist Arrives	Contractor
September	- TA Crop Agronomist, RELO (Yundum) & FSSP Trainer Arrive	Contractor
	- Interim Project Committee Formed	GOTG/Contractor
	- Construction of Sapu House Begins	Contractor
	- Local Staff Recruited	Contractor
October	- ARMS Working Group Formed	GOTG/Contractor
	- Phase 1 Irrigation Study	" "
	- Analysis of Existing Data	" "
	- Preparation Reports on Gambian Farming Systems Begin	" "
	- ISNAR Consultant Visit	Contractor
November	- Advisors/Trainers, Crop Agronomy & Horticulture	Contractor
	- Study Tour Senegal by FSRE/E Regional Teams	"

December

- ARMS Working Group Report Submitted GOTG/Contractor
- Advisor/Trainer, Livestock Arrives Contractor
- Training Plan for Project Revised "
- Village-based FSR/E teams formed GOTG/Contractor

QUARTERS

1986

1st Quarter

- TA RELO (Sapu) Arrives Contractor
- ARMS Established GOTG
- Financial Procedures for
- ARMS Operation Certified GOTG/AID/Banjul
- 1st Group Advisors/Trainers Contractor
- Library, Livestock, & Forage "
- FSR/E Study Tour Botswana "

2nd Quarter

- MDI Workshops on ARMS GOTG/Contractor
- ISNAR Consultant Visit Contractor
- Review 1985 OFTs & Plan 1986 Program GOTG/Contractor
- TA in Forage Agronomy Joins Project Contractor
- Review of 1985 Research
- Station Trials and Plan 1986 Programs GOTG/Contractor
- Advisors/Trainers, Soil/Plant/Water, Crop Protection & Biometrics. Contractor
- 1st Group Trainees (LT) Identified GOTG/Contractor

3rd Quarter

- Advisors/Trainers, Ag Engineering Horticulture, Crop Protection, Forage, Statistics, Crops. Contractor
- 2nd group of Advisors/Trainers Depart "
- RELO's Extension Promotion Projects in Progress Contractor
- On-station and On-farm Trials in Progress GOTG/Contractor
- 1st Group Trainees (ST) Depart " "
- 1st Group Trainees RA's Arrive Contractor

4th Quarter

- Policy Analysis, Small Ruminants Arrive " "
- TA (Administration) Departs " "
- Horticultural Crops Trials in Progress GOTG/Contractor

1987

1st Quarter

- 3rd Group of Trainees (ST) Depart GOTG/Contractor
- MDI Workshop on ARMS GOTG/Contractor
- Advisors/Trainers,
Library, Horticulture Contractor
- Research Program Reviews GOTG/Contractor
- ISNAR Consultant Visit Contractor

2nd Quarter

- Annual Research Review Using
ARMS Procedures by Tech Sec, NARB GOTG/CONTRACTOR
- Advisor/Trainer, Horticulture Contractor
- RELO's Assist Planning
Promotion/Extension Program GOTG/Contractor
- 2nd Group Trainees (LT) Identified GOTG/Contractor

3rd Quarter

- 4th Group ST's Trainees Depart GOTG/Contractor
- On-station and On-farm Trials
in Progress GOTG/Contractor
- 2nd Group Trainees (LT) Depart GOTG/Contractor

4th Quarter

- Horticultural Crops Trials in Progress GOTG/Contractor

YEAR

1988

- 1st Group RA's Depart, 2nd
Group Arrive Contractor
- In Depth Evaluation AID/Banjul/GOTG
- RELO (Yundum) Departs, TA
Livestock and Horticulture Arrive Contractor
- Advisors/Trainers, ISNAR,
Crops, Livestock "
- 5TH-6TH Groups Trainees (ST) GOTG/Contractor
- MID Workshop on ARMS " "
- Annual Research Review " "
- 3rd Group Trainees (ST) Depart

1989

- RELO (Sapu) Departs Contractor
- Advisors/Trainers, ISNAR,
Crops, Livestock "
- 7th - 8th Groups of ST Trainees GOTG/Contractor
- Research Associates Crops, Livestock Contractor
- Annual Research Review (ARMS) GOTG/Contractor
- 2nd Group RA's Depart Contractor

1990

- TA Horticulture Departs Contractor
- 9th - 10th Groups of ST Trainees GOTG/Contractor
- Advisors/Trainers ISNAR,
Crops, Livestock Contractor
- Research Associates Crops, Livestock Contractor
- Annual Research Review (ARMS) GOTG/Contractor

1991

- 2nd Evaluation AID/Banjul/GOTG
- PP for Phase II designed AID/Banjul/GOTG
- 11th/12th Groups Trainees(ST) GOTG/Contractor
- Annual Research Review (ARMS) GOTG/Contractor
- Advisors/Trainers, ISNAR,
Crops, Livestock Contractor

1992

- Phase I Completed
- Phase II Started
- Remaining TA Team Departs
or Continues with Phase II Contractor
- Annual Research Review (ARMS) GOTG/Contractor