388-0075

AGENCY FOR INTERNATIONAL DEVELOPMENT

PROJECT IDENTIFICATION DOCUMENT FACESHEET (PID)

1. TRANSACTION CODE: A = Add, C = Change, D = Delete — A | Revision No. | DOCUMENT CODE: 1

2. COUNTRY/ENTITY: Bangladesh

3. PROJECT NUMBER: 388-0075 PDCA4374

4. BUREAU/OFFICE: A. Symbol: ANE | B. Code: 04 — Bureau for Asia and the Near East

5. PROJECT TITLE (maximum 40 characters): Higher Agricultural Education

6. ESTIMATED FY OF AUTHORIZATION/OBLIGATION/COMPLETION
- A. Initial FY: 89
- B. Final FY:
- C. PACD: 96

7. ESTIMATED COSTS ($000 OR EQUIVALENT, $1 =)

FUNDING SOURCE		LIFE OF PROJECT
A. AID	DA Grant	19,100
B. Other U.S.	1.	
	2.	
C. Host Country		5,000
D. Other Donor(s)		
TOTAL		24,100

8. PROPOSED BUDGET AID FUNDS ($000)

A. APPROPRIATION	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE 1. Grant	C. PRIMARY TECH. CODE 2. Loan	D. 1ST FY 1. Grant	D. 1ST FY 2. Loan	E. LIFE OF PROJECT 1. Grant	E. LIFE OF PROJECT 2. Loan
(1) DA	680B	630		4,000		19,100	
(2)							
(3)							
(4)							
TOTALS				4,000		19,100	

9. SECONDARY TECHNICAL CODES (maximum 6 codes of 3 positions each): 012 | 080 | 631 | 620 | 660 |

10. SECONDARY PURPOSE CODE: 180

11. SPECIAL CONCERNS CODES (maximum 7 codes of 4 positions each)

A. Code	BS	R/ED	R/AG	TNG	XII		
B. Amount							

12. PROJECT PURPOSE (maximum 480 characters)

To make the Bangladesh Agricultural University a more developmentally relevant institution and to strengthen its capabilities to produce, on a sustained basis, high quality, appropriately trained graduates who will effectively serve in public and private entities supporting the rural sector.

13. RESOURCES REQUIRED FOR PROJECT DEVELOPMENT

Staff: A single-person IQC consultant for 8 weeks; a Title XII university team for approximately 10 weeks.

Funds: Approximately $130,000 for outside consultants under Project Design and Support funding (398-0249).

14. ORIGINATING OFFICE CLEARANCE

Signature: Priscilla M. Boughton

Priscilla M. Boughton

Title: Director, USAID/Bangladesh

Date Signed: MM 05 DD 05 YY 88

15. DATE DOCUMENT RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION: MM DD YY

16. PROJECT DOCUMENT ACTION TAKEN
- S = Suspended
- A = Approved
- D = Disapproved
- CA = Conditionally Approved
- DD = Decision Deferred

17. COMMENTS

18. ACTION APPROVED BY — Signature / Title

19. ACTION REFERENCE

20. ACTION DATE: MM DD YY

AID 1330-2 (8-79)

Bangladesh
Higher Agricultural Education
(Project No. 388-0075)

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I. INTRODUCTION

Agricultural production in Bangladesh has grown at a relatively respectable 2.7% per year from the post independence recovery year of 1974 through 1988. (Recent growth trends have been much poorer, e.g., 1.8% from 1982 through 1988.) However, Bangladesh economic development requires a significantly greater rate of growth of agricultural production to put the country on a higher income and employment path.

A major impediment to accelerating economic growth and agricultural productivity is the declining quality of education at all levels - primary, secondary and tertiary. Literacy rates are appallingly low, especially of the rural female population, and have not increased appreciably over the last decade. At the university level there has been a marked decline in students' English language capability and in the general quality of education being provided. Employers are dissatisfied with the capabilities of graduates and their problem solving skills. The Bangladesh Agricultural University (BAU) has not been immune to this malaise in the education sector.

AID had an earlier opportunity at BAU to assist human resource development in Bangladesh, when, in the late sixties, we supported Texas A and M University in an institutional development project with BAU. Unfortunately, project activities came to a precipitous halt with the War of Independence and were never resumed. The momentum was lost and BAU could not sustain the advances made. Over the years BAU has became increasingly out of touch with grass roots problems and disconnected from the development needs of Bangladeshi farmers. It is not fulfilling its potential as an institution for promoting agricultural development.

There is a strong case for assisting BAU at this time. Improvements in the quality of its teaching, research and outreach activities can have a direct impact on agricultural production, equity and womens' economic and social status in Bangladesh. Project activities will seek to make BAU a more relevant development institution, in touch with the problems of the rural poor and with strong linkages to allied organizations involved in agricultural development in Bangladesh. By virtue of the important contributions it can and will make to the agricultural sector -- primarily through the improvement of the quality of its graduates -- we see real potential that it will be able to develop into a self-sustaining, developmentally relevant institution.

The literature on returns to investment in higher agricultural education have shown very high rates of return. AID's own prior experience with higher agricultural education in South Asia and elsewhere indicates that institutions like BAU can become important cogs in the development wheel if provided financial and technical assistance over sufficiently long periods of time. This PID outlines a proposed project strategy to assist BAU to become a relevant, modern and self-sustaining development institution.

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II. PROGRAM FACTORS

A. Conformity with Bangladesh Government Goals/Priorities

The production by BAU, on a sustained basis, of high quality, appropriately trained graduates who will effectively serve in public and private entities supporting the rural sector directly conforms to objectives in the 1961 Ordinance which established BAU, and a more recent (1983) statement of objectives in the University's Handbook of Information. The Handbook states that "trained manpower is the main national resource" and that one of the objectives of the University is "to provide induction courses, in-service training courses and refresher courses for personnel of different nation-building organizations and also for farmers/farm leaders in different aspects of agriculture and rural development."

The need to improve the quality of professional agriculturalists is widely recognized. Surveys done by BAU researchers show that both employers and graduates feel the BS training is not practical enough, that there is insufficient understanding of small farm problems and how to apply technologies available. The project will seek to improve the underlying reality, and thus the image.

The project will make indirect, but fundamental, contributions to a major BDG goal - foodgrain self-sufficiency. With 75% of its population engaged in farming, Bangladesh still does not feed itself. Through higher quality training, present and future graduates can be given greater capability to plan and execute programs that will enable traditional, illiterate farmers to use yield increasing methods and rural entrepreneurs to develop and use new agricultural processing technologies, marketing and transport systems, etc.

The project will contribute indirectly, but in a major way, to increasing rural employment, a high priority BDG goal. Since the land frontier has been reached, increased output and employment depend on the ability of hundreds of thousands of small subsistence farmers to increase land productivity. This can also be expected to increase labor demand, labor productivity and incomes. Highly qualified agriculturalists and rural managers are needed to quicken the pace of innovation and adoption in rural Bangladesh. Increased agricultural productivity and rural income will also fuel the takeoff of related businesses thereby generating further employment and income benefits.

The project is consistent with the stated Government policy goal of improving education in Bangladesh. However, in the face of scarce resources, there has been inadequate support for this goal in budget allocations to BAU. The Secretary of the Ministry of Education has, however, given the Mission assurances that the budgetary situation would be reviewed. A stronger, more vital BAU would also have a broader base of constituent support for increased allocations.

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Other donors are interested in making either direct or indirect contributions to the overall effort. JICA has indicated its strong interest to collaborate directly in the project. The University of Kyoto is already working with BAU on a joint study project to develop a strategy for agricultural and rural development in Bangladesh. The British Council anticipates further assistance to the BAU Faculty of Fisheries through Sterling University. It will likely conduct training courses at BAU's Graduate Training Institute and may also offer faculty Ph.D. awards. The Council, through the Overseas Development Administration, trained about a dozen MS candidates from BAU between 1982-84. The Dutch, through Wageningen Agricultural University, recently initiated a joint declaration of intent with BAU. Planning for a long term project will likely start in September, 1988. The Dutch anticipate providing assistance to the animal husbandary faculty and the Graduate Training Institute. Usually Dutch projects of this nature are funded at about $250,000/year in 3-year increments. One long term senior advisor will be engaged plus short term advisors as jointly determined by BAU and Wageningen.

B. Relationship to Mission, Bureau, and AID Strategies/Policies

The project addresses the Mission program goal of increasing agriculture productivity through the development of agricultural human resources (CDSS 1986). By strengthening BAU's capability to appropriately train people in agriculture and related disciplines, the project addresses a critical constraint to attainment of Mission objectives of (1) increased productivity per unit of land (2) crop diversification through developing and disseminating agricultural technologies and (3) increased employment through development of appropriate rural industries. It thus complements other Mission projects, e.g., the Agricultural Research II Project, the Fertilizer Distribution Improvement II Project, and such employment generating activities as Rural Electrification and the Micro Industries Development Assistance Society. By increasing the supply of high quality rural development managers, the project can have a profound impact on the effectiveness with which public and private resources in agriculture are used in meeting the Mission's program goals.

It also draws on the findings of a USAID institutional analysis of BAU (Calavan, 1987), a case study of BAU (Huda, et.al., 1987) and related BIFAD analyses and writings about investments in higher agricultural education (Schuh, 1984, Bonnen, 1986). The project will be designed to reflect lessons learned from AID's three decades of experience with institutional development projects. The project must address problems of institutional quality deterioration, of a precipitate drop off in public sector demand when agricultural bureaucracies are "staffed up", of how to create and meet a demand for graduates in the private sector, and how to overcome a range of constraints that keep the university from attaining a more significant research role. (CDIE Impact Studies on Agricultural Higher Education).

The project will also directly address AID priorities set out in the ANE/TR draft Working Paper on Human Resources Development (State Department Cable 336553, 30 October 1987). A major priority emphasis is on establishing mechanisms to produce and manage technological research and scientific

training through second generation linkages between U.S. and host country public and private sector institutions. It also stresses the notion that human resource development should be a centerpiece of the efforts to modernize in Asia. The project will also be consistent with AID's policies for institutional development and will utilize the policy directive on Title XII.

III. PROJECT DESCRIPTION

A. Perceived Problem

The Bangladesh Agricultural University (BAU), the nation's only agricultural university, is not providing the institutional leadership and quality of teaching, research and extension services needed to facilitate the country's agricultural development. The rate of development in the rural sector is constrained by a lack of suitably trained personnel to oversee the implementation of BDG, donor and privately financed programs. Resources per se are not the dominant constraint. There are enough students, teachers and classrooms. The problem lies more in allocation of resources, their effective use and the limited amounts of scientific, technical and operational supplies available. The main need is for quantum improvement of a system that will provide high quality relevant education with the capacity to train agriculturalists in the quantities, areas and levels of specialization required. BAU's inability to provide manpower of sufficient quality and the right professional skills is a major impediment to achieving a more rapid rate of growth in foodgrain production and to successful diversification into other agricultural production activities among the country's small, largely subsistence, farm households. The problem to be addressed is how to build the sustainable capacity in BAU to provide high quality education and produce trained manpower to develop and apply appropriate agricultural technologies (USAID Project Concept Paper, 1987; Calavan, 1987; Huda, et.al., 1987; Wennergren, et.al., 1984).

BAU is the centerprice of higher agricultural education in Bangladesh. All other agricultural colleges and institutes are under BAU's academic purview and control. Further investment in BAU cannot help but have a strong, positive impact on these institutions as well. Preliminary analysis confirms that it is the logical recipient of our limited resources to address perceived problems in this sector.

BAU is also a linchpin in Bangladesh's agricultural development machine. Unfortunately, at a time when guidance is needed -- in re-evaluating essential professional skills, assessing manpower needs, reconceptualizing the research agenda, and other tasks ordinarily expected of a first rate university -- BAU is suffering from stagnation and a negative public image. Some of the major symptoms of BAU's lack of relevance as a development institution are:

-- The University has become intellectually and politically isolated; donors and the BDG have principally supported parallel structures for research and extension, rather than periodically re-evaluating BAU's role and ensuring it remains an integral part of an inter-linked system.

-- Relatively few teaching staff have received Ph.D's in the last ten years. Biological and information technology is changing very rapidly and offers enormous opportunity to Bangladesh. However, serious intellectual "ageing" is taking place with very little opportunity for updating experiences of senior faculty or introducing "new blood." While most senior staff have degrees from other countries, almost all junior staff are products of BAU. The specter of a highly inbred staff possessing out of date training is looming.

-- Because of limited program resources, University staff are underutilized and undermotivated. This leads, among other things, to stagnation, low morale, decline in quality of teaching, and low output of research and new, high quality teaching materials.

-- Early on, the University's teaching role was emphasized, to provide trained manpower for nation-building departments. As development efforts proceeded and positions were filled, budgets became more constrained. Now when it should be more concerned with student quality, and with forging stronger links with farmers and the private sector, financial resources for new initiatives are limited or declining.

-- There is strong evidence that the supply of presently available BS graduates from BAU, the Bangladesh Agricultural Institute (BAI) and Patuakali Krishi College (PKC) is greater than the demand. As a result there is a growing pressure for admission to MS programs, but the graduates at that level also face strict demand limits. Public sector demand has leveled off and private sector demand is uncertain. However, it is hypothesized that demand for BS graduates in agriculture with more relevant and sharper honed skills will be strong, especially in the private sector.

-- There is widespread conviction there has been a deterioration in quality of graduates. The ability of the faculty to increase student understanding of, and skills in, problem-solving have lessened substantially.

-- In much the University does, form (structure, organization, procedure) receives a disproportionate amount of attention compared to function. Blind loyalty to administrative form promotes rigidity and stifles creativity.

-- Both external and internal leadership needs to direct efforts toward more integration and cooperation -- among academic departments and faculties, teaching and research programs -- within the University. More attention must also be given to identifying priority roles and activities that BAU can take on within the total agricultural development system, in a complementary way.

-- Government policy and organizational structures have altered to meet needs, but the University's limited linkages with Bangladesh's research centers and extension system constrain its contributions. Curricula have not been modified to reflect these changed needs in research and extension organizations.

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-- The University has become disconnected from changing rural trends and requirements. For example, faculty are not actively observing and analyzing current patterns of decentralization and private sector growth and anticipating future needs in research, teaching syllabi, and non-degree training courses.

-- The institution has aged without maturing. Research products have not improved in quality nor become more relevant to the conditions faced by Bangladesh's small farmers. The research output of the majority of teaching staff (with some significant exceptions) suggests that they have had little experience in interdisciplinary research, or in identifying, analyzing and solving small farming systems problems. Incentives for this type of research are not forthcoming, either within the University or from Dhaka.

The project will address these symptoms by supporting the revitalization of BAU's institutional development as a major agent of rural development in Bangladesh.

B. Project Goal and Purpose

The goal of this project is to improve Bangladesh's agricultural productivity by improving the quality of professionals working in the agricultural sector. In the past 15 years overseas participant training has been the principal means employed by the Mission to strengthen human resources in agricultural research, input distribution, agricultural policy and rural finance programs. USAID has done relatively little to improve human resources in agriculture by developing educational system capabilities within Bangladesh.

A modest start was made in the 1960s when USAID supported efforts of Texas A and M University toward institutional development of BAU, but assistance was curtailed at the time of the war for independence and never resumed. Through IDA credits during 1968-1970 and 1975-1978, BAU received World Bank assistance in building a large physical plant and equipping it to a limited extent. Although weaknesses of the University are outlined above in substantial detail, the proposed project reflects our confidence that a firm human, institutional, and infrastructural base exists in BAU and that major strides can be made toward building a national agricultural university capable of producing skilled manpower suited to the changing needs of the country while participating effectively in the development of the rural sector.

The purpose of the project is to make BAU a more developmentally relevant institution and to strengthen its capabilities to produce, on a sustained basis, high quality graduates who will effectively serve in public and private entities supporting the rural sector. Because the project focuses on educational quality, immediate beneficiaries are the institution's faculty and students. But as graduates acquire improved skills and are employed by public and private organizations in programs effectively utilizing these skills, and better research and extension efforts begin to meet the needs of small, subsistence farmers and rural residents, benefits will begin to accrue to large numbers of the poorer segments of the rural areas.

C. Expected Achievements/Accomplishments

Specific tasks to be accomplished by the project, expressed here as project outputs, include:

Improvement of BAU's administrative capabilities: High priority will be given to an initial institutional self-study that examines how BAU can better serve the needs of small subsistence farm systems and rural households over the next 10 years. The output will be a concise written plan for the University that identifies priority actions to be supported by faculties and departments in improving teaching, research and extension. The self-study will highlight management aspects of the university that need strengthening. As the project progresses, actions will be taken to strengthen such institutional variables as program planning, resource allocation, linkages with appropriate ministries and departments, and to develop a capacity for self analysis and reform.

One of the major outputs of the self-study will be recommendations for changes in the University's outdated Ordinance. These necessary changes, along with other project activities meant to foster BAU's renewed relevance to the agriculture sector and improved constituency support -- among donors, government and clients -- will insure the University's institutional sustainability.

Improvement of staff competencies in areas of need: Advanced studies will be planned for selected staff (academic, managerial and support) based on the priority needs identified in the self-study and subsequent program plans. Where long term training is required, in appropriate cases "sandwich" degree programs will be arranged, i.e., BAU will issue the degree, but a significant portion of course work will be done in a foreign institution. Short courses for both academic and support staff will be arranged on campus and attendance at appropriate short courses in Bangladesh, third countries, and the U.S. will be supported. Sabbaticals, exchanges with colleagues in Government and other universities, and participation in conferences, meetings and study tours will be supported.

Improvement in the quality of BS graduates: To aid in balancing supply and demand for BS graduates, the project will assist BAU to increase communication with potential employers, both public and private. Prospective and retrospective research studies on student admission and performance standards will be conducted to demarcate reasonable ways to reduce intake and increase quality. Research will be done to determine how to attract and enroll a higher proportion of qualified students with farm and rural background. The project will also develop and conduct pilots for agribusiness courses.

Surveys and job function analyses: These studies will be conducted to determine how syllabi and course content can be made more professionally relevant to the needs of future graduates and their employers. Part of the task is to collaborate closely with public (e.g., DAE, which is a large employer) and private employers to increase knowledge and understanding of the job functions expected of graduates during the first years of employment. A separate, but related, analysis will focus broadly on the "needs of the rural sector." Job function investigations will also be used in designing in-service training courses for alumni.

Increased opportunities for student "fieldwork" and mastery of field skills: More field visits as part of lecture and lab courses will be supported. More practical examples will be included in syllabi and major exams. Requirements that students work at farming system sites, solve field problems, etc., will be considered. In addition to increasing knowledge about farm problems, students will learn selected "how-to-do-it" skills based on a better understanding of their intended job functions. If they are to supervise extension agents who work mainly with rice farmers, they will learn rice production skills. If they are working with a market cooperative they will need certain marketing skills. Skills for supervisory functions, including expertise in program planning, management and supervision, report writing, and office record keeping will be stengthened. The syllabi and course content must specify these skills and the teaching methodology modifi d to inculcate them.

Increased availability of high quality, relevant teaching materials: The project will support the development of appropriate and relevant teaching materials to augment the syllabi and course changes mentioned above. Teachers will be supported in developing case studies, laboratory manuals, and class exercises as well as writing standard text books based on Bangladesh agriculture. The project will also provide appropriate audiovisual equipment geared to use and maintenance evaluation.

Improved linkages with farm families: To strengthen these linkages, BAU will establish a national "advisory council" of farmers and other rural household members. Through consultation with this group, BAU staff will identify and discuss issues of current concern to farm families. Some issues will have policy implications and will complement USAID efforts to develop a social scientists' network. Farm fora for men, women and farm youth will be conducted. A forum methodology will be used to effectively obtain inputs from rural households about technical, organizational and social/community difficulties affecting their decisions.

Improved linkages with DAE and other extension agencies: Extension-related research will be jointly planned and executed by BAU and DAE (or others) to identify improved extension methods, including: how to spread the skills and knowledge of the farming systems approach to technology generation and transfer, and training needs for various extension job functions.

Improved linkages with research institutes: The project will arrange BAU staff exchanges or sabbaticals with selected research institutes (national, regional, or international) to improve linkages as well as professional experiences and competencies. Interdisciplinary farm issue fora for researchers will be sponsored to bring together researchers and key operations people from relevant entities including MOA, DAE, BARC, BRRI, BARI, BIDS and regional universities.

Improved technical agricultural research capabilities: Additional research funding will be provided to BAU on an annual, auditable basis. BARC will approve/disapprove all research proposals and budgets. The project will support local currency costs of qualified thesis research proposals by candidates for the MS and Ph.D. degrees at BAU. Sufficient funds will be provided to support all Ph.D. dissertations, but only if and when the student has produced a proposal of respectable quality. There will also be sufficient funds to support a significant number of "distinguished" MS thesis proposals per year.

In addition, the project will support the Ph.D. studies of selected academic staff, some who would do all the course work and the degree externally and some of whom would obtain a BAU degree with substantial external course work. In both instances, degree research would be done locally and supported by the project or PL-480 Title III funds. An external professor will be brought to Bangladesh for short periods to guide the field research. Visiting research advisors will give special seminars or short courses on appropriate topics for graduate students and academic staff at BAU.

Although commodities are a minor part of the overall project it seems likely that it will be necessary to reinforce BAU in the following key areas:

Upgraded laboratory facilities: A central research laboratory will be established and equipped with selected high priority equipment representing essential needs to improve the quality of undergrduate training and to improve post graduate research. Instruments or equipment for staff to conduct more specialized research-based analyses or for teaching demonstrations will be provided on a limited basis. In the early stages of the project, this central lab will be located in a suitable, existing building. During the latter part of the project, evaluation will determine the advisability of estabishing a separate building as a central lab.

Upgraded library facilities: Improvements will be made in library holdings and operations. A special research holding section will be provided along with specialized training for professionals who staff it. A space assessment will guide better utilization of present space. Technicians will be trained in customer service aspects of librarianship as well as in processing documents (cataloguing, binding, etc.). Selected acquisitions will be made. Following in interim evaluation of needs, maintenance capabilities, and comparative acquisition costs, a microfiche system will be considered.

Establishment of computer facilities: A modest computing center will be developed for graduate students and faculty. Central administration will be provided with computer wherewithal to handle essential record keeping and accounting, as will the individual faculties. Departments will each rec ''e a micro-computer for academic purposes.

Improved communication: Academic staff at BAU are isolated in several ways. The project will provide inputs to reduce that isolation and to make it more possible for project outputs to be achieved. An offset printing press and capability to operate and maintain it will be provided. Recurrent costs will have to be met by the subscribers to journals and purchasers of publications. As a part of the same operation, copiers will be provided along with guidance and training in operating and managing a centralized duplication facility. Users will support all costs through the price/copy including paper

and other supplies, maintenance, repair, amortization, operator's salaries, etc. To facilitate internal communications, an improved messenger service utilizing some of the many Grade 3 and 4 employees will be implemented. Based on interim evaluation the installation of an improved telephone exchange will be considered.

Additional transportation for increased student and faculty field experiences: Mobility of teachers and students for gaining more field experience both at the undergraduate level and post-graduate research level and for improving linkages with other entities will be improved through the acquisition of a limited number of buses and other vehicles. Operations and maintenance systems will also be improved. The project will also support faculty/student per diems for longer term field trips on a matching/declining basis.

Improved physical facilities: Until BAU's role and doctrine are clarified which then gives direction to program and high priority physical requirements, the most visible need at the BAU compus is maintenance, repair and/or completion of the present facilities. The project will provide a limited amount to meet high priority needs and seek other donor assistance as appropriate. It will also provide funds to offset the cost of an assessment of needs using short-term TA collaboratively with an appropriate BAU/BDG working group.

D. Project Outline

In order to achieve outputs described above, the following inputs are expected to be required:

1. Long-Term Counterpart Advisory Assistance

A three-person team will be stationed at BAU for six years (216 person months). The team will include:

A senior agricultural university administration advisor: This person will have extensive successful association with one or more LDC universities. He/she must have well developed interpersonal and human relations skills. The development administrator will assist the Vice Chancellor, Deans of Faculties and ministry officials with BAU oversight responsiblities on refining the role and doctrine governing university programs, and then advise on carrying out corresponding reforms in operational patterns.

A research methods advisor: This person will be experienced in supervision of technical and socio-economic research with substantial involvement in farming systems research and extension activities and not less than 3 years of successful LDC university experience. The advisor will assist in improving research methodology, analytical and reporting skills of faculty and graduate students, and will lead the team's efforts in assisting BAU to build linkages between research and extension.

An agricultural sciences teaching advisor : This individual, probably an agricultural generalist or agronomist, will have a strong hands-on teaching orientation and will concentrate on improving BAU teaching at the undergraduate level. He or she must be knowledgeable about state of the art teaching methods, be experienced in curriculum and syllabus development, and in preparation of teaching materials. The advisor will focus on improving the quality of the undergraduate learning experience.

Once the team members have been identified, the implementing institution will appoint one of their number to be chief of party.

2. Short-Term Advisory Assistance

One hundred sixty person months of short-term advisory services will assist in the following areas:

Administrative reform advisory support: About 36 person months will be provided for special short term consultancies for the conduct of courses for administrative officers and others in the areas of budget and finance, accounting, public administration, job function analyses, and the like.

Research methods advisory support: Approximately 48 person months will be provided in experimental design, statistical (quantitative and qualitative) analysis of research data, farming systems research methodology, and the like. This should include a regular short-term visitor who works with faculty on developing proposals for external funding, including the OCI and NAS grant programs.

Teaching improvement advisory support: About 60 person months will be provided to bring good U.S. teachers to work with particular departments for 2-3 weeks at a time for 3-4 visits over 2-3 years. They will assist in curriculum analysis and development, teaching methods, preparation of teaching materials and aids, and the like.

Other advisory support: About 16 person months will be provided in such areas as physical plant maintenance, research station management, developing private sector linkages, research methodology for extension, drawing policy implications from research results, library operations, etc.

For each short-term specialist, the Vice-Chancellor and Deans will be responsible for assigning an understudy colleague to work closely with the specialist. This understudy will have continuity responsibility for the subject matter. Where a cumulative learning process is necessary to assure a reasonable permanent grasp of skills and knowledge, a short-term specialist will be brought back for repeat involvement. Scopes of work for each short term specialist will be approved by the COP, the project coordinator and the USAID project officer.

3. Training

Long and short term training will be provided to upgrade skills.

Long-term Ph.D. training for faculty: About 10 trainees will be chosen for Ph.D. programs in the U.S. or third countries, while about 20 other BAU faculty members will pursue "sandwich" degrees, in which the Ph.D. candidate spends approximately one year at a U.S. or Asian university, carries out dissertation research in Bangladesh (with at least one expatriate advisor), and is awarded a BAU degree. The training undertaken will be complementary to existing departmental strengths.

Short-term training: Approximately 40 BAU employees will be given 150 person months of short-term (6 months or less) external training. Roughly half of training opportunities will be given to employees in administrative officer grades 1 and 2 and those who work in such key areas as instrument and equipment maintenance, library cataloguing and services, etc.

In-country training: Approximately 500-1000 person months of in-country and on-campus short courses will be used to disseminate skills and knowledge among teachers/researchers, administrative officers and technicians. Workshops in such areas as farming systems research, rapid rural appraisal, and laboratory management will be offered.

4. Commodities: Funds will be made available for the procurement of the requisite laboratory, library, computer and teaching equipment, vehicles and materials necessary to upgrade selected facilities.

5. Field Work: Funds will be made available to support increased student and faculty field experiences, for surveys and for improving linkages with farmers, extension and research organizations.

6. Physical Facilities: Limited funding will be provided to upgrade selected existing facilities and for long-term advisor housing.

7. Monitoring and Evaluation: Funding will be made available for development and implementation of an extensive monitoring and evaluation program.

IV. FACTORS AFFECTING PROJECT SELECTION AND FURTHER DEVELOPMENT

A. Social and Institutional Considerations: BAU is a large, complex institution in Bangladesh's public sector; it suffers from many of the social and administrative constraints of such institutions. Problems include: conservative administrative practices; student and (sub-professional) staff indiscipline; budgetary levels and procedures which hamper innovation and strategic thinking; severely limited resources for research; and a teaching system which emphasizes theory at the expense of practical topics. However, these problems were identified early in project development* and most are being treated, directly or indirectly, in project design.

*For a detailed analysis of social, political, and administrative issues, see Calavan. An Institutional Analysis of the Bangladesh Agricultural University, October, 1987.

There are a number of reasons for optimism regarding socio-cultural feasibility--faculty members are dedicated to teaching and research; a majority of serious students attend classes, pass exams, and find appropriate work; the academic timetable, between political disturbances, moves steadily forward; and everywhere there is resourceful "making do" with limited resources. In addition, the Project will directly address, with significant resources, two major concerns of administrators, professors, and students--improved support for research and an upgraded, more relevant teaching program. No insurmountable problems are anticipated, and the project is socially feasible. However, implementors in USAID and the US consortium or university selected to manage the project must beware of naive optimism; they will encounter numerous social/institutional impediments to implementation. With these impediments in mind, two decision matrices have been developed to encourage and guide implementors in anticipation of problems. They are:

-- "A Framework for Anticipating Challenges to 'Institutional Strengthening' at BAU."

-- "Possible Changes in the BAU Teaching System and Likely Sources of Resistance."

These documents are included in this PID as Annex A and are to be regularly consulted and revised by project designers and implementors.

B. Economic Considerations

Project-related costs will include training, technical assistance, commodities, special studies, evaluations and special funds for conducting approved faculty and student research and extension projects. Training will be for both technical and administrative staff, degree and non-degree, and include both participant training in the U.S. and in third-countries and in-country, "on-the-job" training.

Major benefit categories will include both quantifiable benefits and beneficiaries and intangible benefits. The intangible, but highly relevant benefits include enhanced quality of education and graduates better able to serve the agricultural sector; increased exposure and use of new technologies, methodologies, teaching methods, etc.; and increased exposure to and sympathy for (i.e. understanding of) U.S. agricultural and educational (e.g. land-grant university) systems, as opposed to other systems. Quantifiable outputs include: quality of students graduated, numbers of faculty and administrators trained, and research projects and farmers reached through direct BAU outreach activities.

The Project Paper will document the importance of BAU in the context of Bangladesh agricultural development, including impacts on research, extension, and the public and private sectors. The project rationale is particularly relevant in this era of slowing agricultural growth, as compared to population growth. The Project Paper will also address the merits of developing BAU in the context of other agricultural education and training institutions in the country.

Major information deficiencies exist that will be overcome during the Project Paper design, including the demand for graduates in both public and private sectors, curriculum needs, training needs (plan) for faculty and administrators, research and extension activities and needs, existing information linkages with other relevant in-country and out-of-country institutions and needed future plans, and commodity/equipment needs.

Given the general intangible or unmeasurable (i.e. non-market) nature of the expected benefits, a Cost Effectiveness or Least Cost (Combination) Analysis is proposed for the Project Paper, whereby several alternatives will be considered and the least expensive one identified for a given level of benefit(s). The Project Paper will consider the following alternatives: (a) investing in devloping BAU versus investment in other in-country institutions (both degree and non-degree); (b) project participant training in the U.S. versus third-countries, with consideration of quality and quantity tradeoffs; and (c) enhanced capacity to conduct degree training in-country at BAU versus continued degree training abroad for the longer-term.

C. Relevant Experience with Similar Projects

The Bangladesh Agricultural University was established in 1961 at Mymensingh with the Veterinary and Animal Husbandary College as its nucleus. Physical facilities, teaching staff and instructional equipment were inadequate. In the mid sixties, USAID assistance ameliorated the inadequacies to some extent. Under an AID contract, Texas A&M University provided about 70 man-year's of technical assistance in the basic subject areas of agriculture. Master of Science and doctoral training in the U.S. for 40 Bangladeshi's was also included in the program as were resources to develop some physical facilities on the 1000 acre campus.

Two IDA credits were also signed in the period 1964-1966 to construct physical facilities and provide equipment for the expansion of teaching capacity. A further 50 man-years of fellowships were provided for selected staff development.

The War of Independence in 1971 brought implementation of IDA and USAID projects to a complete halt. The IDA later funded its First Education Project in 1973, essentially to complete the work started under its two previous education credits. For a number of reasons, AID never resumed its pre-independence support to BAU.

A recent evaluation of the IDA First Education Project, which bears great relevance to the AID effort as well, concluded that "investments in physical infrastructure and staff development become meaningful in the context of its future development of quality education, research and extension activities. These have not been achieved through this project but their attainment is crucial to the future sustainability of the project. For continued sustenance, there is a need to consider further investments in BAU." This study also found that there was an absence of linkage of the project with other complements of the wider agricultural system which severely limited its success.

These findings are consistent with AID experience in agricultural higher education in other parts of the developing world. In Morocco, an AID Impact Evaluation concluded that "institutional development requires the sustained commitment of financial and technical assistance over long periods of time." Other experience in Africa suggests that second generation problems commonly shared by institutions which were former recipients of major AID assistance efforts include: 1) too few resources for research and outreach; 2) limited and declining links to the farm sector; 3) isolation from mainstream agriculture; 4) limited faculty experience in problem-solving research; 5) glutted public sector markets for undergraduates and 6) decline in quality of academic education. These general problems have recently been reported to be common in a larger, worldwide AID review of agricultural universities.

Lessons learned from this collective experience are that university development is a long-term endeavor which requires the sustained commitment of donors and governments alike, and policy and institutional constraints to achieving relevance to the broader agricultural sector and to moving from an institutional development to a systems development agenda are important to institutional sustainability. Our project directly addresses these issues.

D. Proposed Implementing Agency

The project will be implemented by the Bangladesh Agricultural University, a part of the Ministry of Education. BAU will be a full-fledged member of the PP design effort in the same fashion as it has already actively participated in the development of this PID. We have consciously adopted a collaborative approach to project development, first preparing a preliminary "working paper" which received widespread review and discussion by both university faculty and administration. The university is actively seeking our support, evidenced by its formal request to the Ministry of Education to approve project development activities. In turn, the MOE requested BAU to begin preparing formal documentation for project approval. Both the university and the MOE have wholeheartedly supported the technical assistance and training needs outlined in this PID. The Mission has also had positive, preliminary discussion with the Planning Commission, the ultimate approval authority. All agencies agree that the project will satisfy a real need and are highly motivated to carry out the activity.

E. AID Support Requirements and Capability

The project will be implemented and monitored by the Office of Food and Agriculture and will be managed by a highly competent FSN-12 Project Officer. The contractor will be responsible for providing all logistical support services. The Mission has, however, recently identified two local organizations which are capable of furnishing this support.

F. Estimated Costs and Methods of Finance

At this point total project costs to AID are estimated to be $19.1 million over a seven-year period. Grant funds will be used as follows:

	$ (Million)
Technical Assistance	
a) long term (252 MM)	4.665
b) short term (160 MM)	3.200
c) AID/W buy-ins	.500
Training	
a) long term	
1) US or third country	.900
2) Bangladesh "sandwich"	.755
b) short term	
1) US or third country	.750
2) Bangladesh	.500
Commodities	1.500
Field Work - surveys, linkages	.500
Physical Facilities	.750
Monitoring and Evaluation	.675
Contingency and Inflation	4.405
	$19.100

The contribution of the BDG will consist of physical facilities at BAU including the requisite office space for all long and short term technical assistance personnel, full-time services of the staff, funds to cover the cost of participants' salaries while in training and the participation of key officials in related entities. It is also expected that the BDG will maintain the current budgetary trend for all budget heads essential for university operation and will make an effort to increase the nonsalary and benefits position of the budget by 10%. PL 480 resources will also likely be brought to bear. (A number of activities - e.g., faculty research, graduate student research, etc., - may be financed on a declining/matching formula). The Mission will seek covenants requiring Government to increase budgetary support to BAU for certain activities at an increasing rate over the life of the project as our local currency support diminishes.

G. Design Strategy

The Mission has thus far adopted a collaborative style of project development and intends to follow through with this approach in the PP stage. We believe this is especially required in dealing with an academic institution accustomed to a large number of degrees of freedom in their operation and governance. The PID was developed by Mission staff with IQC assistance from Wu Pi ($30,000 in PD&S funds) and in close association with a BAU Project Development Committee appointed by the Vice Chancellor. As a result the PID enjoys broad support in the Government.

We propose to broaden collaboration during the PP stage by engaging a U.S. Land Grant University or Consortium possibly in association with an Historically Black College or University (HBCU) under the Collaborative Assistance Mode. These universities will be responsible for the remainder of the design effort and if the BDG and the Mission are satisfied with performance during this stage, an implementation contract will be negotiated. The Mission is confident that the U.S. university group, BAU and USAID can collaborate successfully in such an effort. Annual work plan reviews and a rolling design will be employed to insure consensus and collaboration.

The Mission believes that the link between design and implementation is extremely important for this institution building and consolidation project. Not only can the university team begin to identify candidates for the implementation phase during the design period, it can also start to forge the solid relationships with BAU staff required for successful implementation. All parties involved will feel that the project is "theirs" and that they have a real stake in project success. The Mission has received additional PD&S funding to begin PP preparation, a process we estimate will take about 4-6 months. The Mission Project Development Committee is made up of Alan Hurdus (OFA), Chairman, Michael Calavan (PDE), Charles Hash (OFA), Latifur Rahman (OFA), George Jenkins (CONT), Pat Ramsey (RLA) and Don Muncy (PRO), members. The Mission recommends AID/W grant the Mission approval to proceed to the PP stage and approval authority for the PP.

We have had discussions with the Government of Japan on a number of occassions about their interest in joining USAID in this project. These talks were initiated by the Japanese and are only preliminary in nature. However,

based on our very successful joint implementation of the Institute of Post Graduate Studies in Agriculture activity, the Japanese appear quite enthusiastic about this possibility. The Mission strongly believes that such collaboration could have strategic importance not only to the design, implementation and sustainability of this project, but to the larger bilateral relationship between our two Governments. We will intensify our discussions with Japan and the Bangladesh Government and ascertain whether such link-up is possible. If it is, we will endeavor to bring JICA into the design process and aim for joint implementation of this project. The two donors would work in close collaboration in design to insure complementarity of efforts but would develop free-standing project documentation and bilateral agreements.

The Mission will encourage BAU to begin the institutional self-study, briefly described in III C above, in the design phase, and will make provision for a facilitator of this activity in the U.S. university design team. We expect that the key issues of institutional sustainability/institutional policy reform will be addressed in this exercise, which will critically examine BAU's mission/mandate for the remainder of the century. The self-study activity will continue through the implementation phase and will become institutionalized through periodic re-evaluations.

H. Recommended Environmental Threshhold Decision

This project will not have a significant effect on the human environment. A negative determination is therefore recommended (See Annex B).

I. AID Design/Policy Issues

This PID shows that there is an excellent opportunity for AID investment in the institutional development of the Bangladesh Agricultural University. However, there are a number of unresolved questions. The design will be charged with addressing the following major issues:

Institutional Sustainability. There are at least 3 major aspects of institutional sustainability that must be addressed by the project - technical, financial and political. The project, to be successful, must create the basis for sustainability beyond the life of project or, alternatively, explicity address needs for continued external assistance beyond the LOP and mechanisms for identifying sources of support (not necessarily from the U.S.). Technical sustainability means addressing the question of how BAU will stay on the cutting edge of new biological, physical and social science knowledge and maintain its stock of human capital. This will also require professional and informational networking inside and outside of Bangladesh. Financial sustainability means addressing the question of availability of budget and other resources for sustained operation. This could include BDG budgetary allocations, retained earned income (e.g. research farm operations, contract teaching, research or outreach) grants and endowment. Political sustainability means developing a network of public and private linkages for sustained support of BAU's mission. This will necessarily include examination of the institutional linkages of BAU (e.g., to the Ministry of Agriculture) and of its current and needed mandates in teaching, research and outreach. The Design will identify those structural changes that will be needed before and during project implementation to ensure institutional sustainability of BAU.

Impact and Beneficiaries. The design team will estimate the likely impact of the project at the goal/purpose level and analyse the projected returns on investments. This analysis will also provide the framework for development of a Monitoring and Evaluation plan in the PP which will allow BAU, BDG and USAID to monitor progress toward project goals. The design will, therefore, make explicit the mechanism linking an enhanced capacity of BAU to employment, output, productivity and the distribution of benefits to low income farmers, the landless and women beneficiaries. Major attention and emphasis will be given in project design to ensuring visability and attention to creating an increased relevance of BAU in its role as an agent of social and economic development in Bangladesh. Improving the quality of academic life on campus is not the goal of the project, it is rather improving the quality of life on farms, low income households and villages.

Systems and Related Institutes. The design will address the issue of appropriate place and linkages of BAU with the rest of the educational system in Bangladesh and in particular its desired relationships with the Institute for Post Graduate Studies in Agriculture, other Agricultural Colleges and the wider University system (including the University Grants Commission).

Donor Coordination. The design will define the future role of other donors in BAU and mechanisms for donor coordination. Specifically the role of potential Japanese assistance and its linkage to project design and implementation will be addressed.

Other. The Project Design will address all the other required areas for Project Design as contained in Handbook 3, including an implementation plan, budget, etc.

The SOW for the design will require the design team, in collaboration with USAID, to examine these issues and make recommendations on how to address them. The answers will provide USAID with principal data for go/no go decision making on the viability of the project, for necessary project conditionably as well as the appropriate level and mix of inputs.

ANNEX A1: A FRAMEWORK FOR ANTICIPATING CHALLENGES TO "INSTITUTIONAL STRENGTHENING" AT BAU*

Interest Group	Things They Want	Things They Fear	Things They Will Oppose	Things They Will Support	Sources of Cleavage
Students	o Production o Jobs, professional skills o More interesting courses o Internships, fieldwork	o Sudden change in the teaching system	o Tuition increases o Poorly explained curriculum change o Elimination of M.Sc. allowance	o Student jobs o Changes in teaching that improve their marketability	o Good students want to learn, poor students want to play politics
Teachers	o More support for research o More freedom in teaching o Peace on campus o Scholarships for study abroad	o Student action	o Reforms which increase individual accountability for teaching quality	o Microcomputers o Teaching and research equipment	o Participant selection
Officers	o "Respect" for academic colleagues o Peace on campus	o Student action	o Administrative reforms that limit their discretion & power. o Elimination of clerical positions, thus lessening patronage positions	o Training for officers o Some computerization	o Selection of officers for training abroad
Employees	o Higher wages o Better working conditions o More services	o Loss of jobs	o Administrative reforms which eliminate jobs of third and fourth class employees	o Training/upgrading of skills for employees (esp. if associated with promotions)	o Participant selection
MOA Organizations	o Well-trained, highly motivated BAU graduates o Ample financial resources to carry out their work.	o Competition arising from "scientific plularism"	o Large research funds specifically reserved for BAU.		
UGC/MOE	o More funding for the universities o More control of the universities				o Competition between "specialists" (BAU) and generalists (UGC).
Other Universities		o They will be held accountable for the "marketability" of their graduates			o Competition with BAU for budget

* Readers should regard this Table as a template or pattern, not a completed piece of work.

ANNEX A2: POSSIBLE CHANGES IN THE BAU TEACHING SYSTEM AND LIKELY SOURCES OF RESISTANCE

Project Changes	Approval Process	Sources of Resistance	Impact on Educational Quality
Minor Changes: Improvement of lecture notes; incorporation of new and more relevant examples in lectures; provision of classroom handouts; use of more advanced technology--i.e. overhead projectors, video, etc; greater use of case studies, classroom discussion, and Q and A sessions. More fieldwork.	Individual teachers can adopt these changes, though those who teach different sections of the same course may wish to coordinate their efforts.	Students will generally welcome "non-participatory" changes as long as syllabus requirements are met and their ability to pass year-end exams is not impaired. Participatory changes will meet some resistance from students; faculty members who persist in stodgy methods will be resentful.	Substantial positive impact with relatively little bureaucratic resistance. Impact will be greater with major system change.
Moderate Changes: Selection of new textbooks and introduction of different supplementary readings. Decision to use additional Bengali reading materials and more Bengali in lectures in a particular course	Board of Study, (Teachers in concerned departments).	There may be differences of opinion in a Department about how a given course should be taught, but these can be bargained out. Students will not resist, since it won't obviously affect their learning experience. They will welcome Bengali texts or reading materials. Rival authors may cause friction.	Moderate positive impact through updating specific technical knowledge, making some subjects more accessible to students, etc.
Major Changes: Significant alteration of course syllabi. Deletion of old courses, addition of new ones. Changes in distribution of examination points. Introduction of elective courses.	Board of Study, Faculty, Academic Council, Syndicate, Vice Chancellor, Employers (government agencies lobby strongly for, or against some changes).	Strongest resistance will be in the Academic Council, where personal rivalries and inter-departmental jealousies will be mingled with genuine concerns for "quality education" and "student welfare."	Strong positive impact, particularly if this kind of work can be undertaken routinely, as part of constant "renewal" process.
Radical Changes: Introduction of the "American" system, with "stand alone" courses, more electives, etc. Introduction of a hybrid system, with less emphasis on year-end exams and greater emphasis on performance in particular courses.	Board of Study, Faculty, Academic Council, Syndicate, Vice Chancellor, Chancellor (President) and wide public discussion.	Changes of this order would be widely discussed in the press. There would be widespread resistance and some support. Initial supporters are likely to get cold feet.	Possible high positive impact. But high risk. The syllabus/exam system provides source of discipline for students and teachers in present system.

Initial Environmental Examination

Project Location	:	Bangladesh.
Project Title	:	Higher Agricultural Education (388-0075).
Life of Project	:	FY 1989 - FY 1996.
Funding	:	AID - $19.1 million grant funds. BDG - Approximately $5 million in Title III taka generations and in-kind contribution.
IEE Prepared by	:	Alan R. Hurdus, Mission Environmental Officer.
Environmental Action Recommended	:	Negative Determination. No further envoronmental studies are required.
Mission Director's Concurrence	:	Signature Priscilla M Boughton Date 5/8/88
Environmental Officer Burea for Asia and the Near East	:	Approved Kathryn A. Peterson Disapproved _____ Date May 25, 1988

A. Project Description

This project will provide technical assistance, training, commodities, and minor construction support to improve the Bangladesh Agricultural University's capabilities to produce quality graduates and to improve institutional linkages with other education, extension and research organizations as well as with farmers. The vast majority of funds will be used for activities that qualify for a categorical exclusion under 22CFR216.2(c)(2)(1). Construction activities will likely include only a few houses for TA consultants and minor refurbishing of already existing facilities.

B. Identification and Evaluation of Environmental Impact

This is primarily an institution building and sustainability project. The technical assistance and training provided will enhance Bangladesh's capability to use its resources in environmentally sound ways. Research actvities supported by this project will take place under controlled conditions and will not have a significant impact on the environment.

C. Recommendation

In view of the minimal environmental impact of this project, it is recommended that a negative determination be made.

ANNEX C. HIGHER AGRICULTURAL EDUCATION
PRELIMINARY LOGICAL FRAMEWORK

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Program Goal: To improve Bangladesh's agricultural productivity by improving the quality of professionals working in the sector.	Goal: Increased foodgrain production in excess of population growth rates; higher yields per acre for rice and wheat; improved secondary crop production; decreased food imports along with increased availability of food supplies at affordable prices.	Goal: Published agricultural statistics of the Bangladesh Bureau of Statitics (BBS); National economic development reports; rgular monitoring and evaluation.	Goal: Research and extension organizations continue to receive current budgetary allocations in real terms over the life of project; favorable weather conditions.
Project Purpose: To make BAU a more developmentally relevant institution and to strengthen its capabilities to produce, on a sustainable basis, high quality graduates who will effectively serve in public and private entities supporting the rural sector.	End of Project Status: Student, faculty and employers all agree that the quality of education and hence graduates has markedly improved over the life of project.	Purpose: Pre-and post-surveys built into project monitoring and evaluation system.	Purpose: Institutional self-study leads to reformulation of BAU's mission/ mandate which becomes institutionalized through revision of ordinance and internalized through project assistance.

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	Magnitude of Outputs to Achieve Purpose:	Outputs:	Outputs:
1. Improvement of BAU's administrative capabilities.	1. Administration streamlined and made more efficient; BAU's mission/ mandate updated and revised, and reflected in changes of Ordinance.	Project evaluations; BDG reports; consultant reports; employer and alumni surveys; Mission staff field trip reports; comprehensive M&E system.	Project implemented as planned; contractor services of high caliber, appropriately selected and provided in a timely manner; BDG commitment to support BAU maintained over time.
2. Improvement of staff competencies in areas of need.	2. Staff qualifications improved by academic and short-term training.		
3. Improvement in the quality of B.S. graduates.	3. Students better able to perform job functions after graduation and to make contributions to the Nation's agricultural development.		
4. Surveys and job function analyses.	4. Surveys and analyses carried out and results reflected in curricula and syllabi revisions.		
5. Increased opportunities for student fieldwork and mastery of field skills.	5. Field-work will enable students to better understand "real world" conditions and to develop job-related skills.		
6. Increased availability of high quality, relevant teaching materials.	6. Class-work enlivened and enriched by updated and pedogogically superior teaching materials.		
7. Improved linkages with farm families.	7. Faculty and students will have the		
8. Improved linkages with DAE and other extension agencies.	8. opportunity and resources to spend		
9. Improved linkages with research institutes.	9. time working directly with research and extension agencies and to interact with farm families.		

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Outputs:	Magnitude of Outputs to Achieve Purpose:	Outputs:	Outputs:
10. Improved technical agricultural research capabilities.	10. Faculty and students will be provided with increased opportunities to upgrade and hone research skills.		
11. Upgraded laboratory facilities.	11. Likely development of a central analytical laboratory to improve research and learning.		
12. Upgraded library facilities.	12. Library support leads to more efficient operation and increased use of facility.		
13. Establishment of computer facilities.	13. University will be better equipped to improve its administration and management; academic work greatly enhanced.		
14. Improved communication.	14. More efficient university administration and improved linkages with constituencies will result.		
15. Additional transportation for increased student and faculty field experiences.	15. Additional vehicles will allow for better linkages and improved faculty and student field skills and will make the university more agriculturally relevant.		
16. Improved physical facilities.	16. Minor improvements in facilities will make the university "work" better.		

NARRATIVE SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	IMPORTANT ASSUMPTIONS
Inputs/Activities:	Level of Expenditure:	Inputs:	Inputs:
AID Provided	AID Provided		
1. Long-term counterpart advisory assistance.	1. $4.665 million	Internal and external reviews and evaluations; project disbursement reports; audit reports.	Procurement, training and services, delivered on a timely basis; project plan implemented as scheduled; AID and BDG funds disbursed.
2. Short-term advisory assistance.	2. 3.700		
3. Training.	3. 2.905		
4. Commodities.	4. 1.500		
5. Field work	5. .500		
6. Physical facilities.	6. .750		
7. Monitoring and evaluation.	7. .675		
3. Contingency and inflation.	8. 4.405		
BDG Provided	BDG Provided		
1. Provide requisite staff and facilities.	1. $2.000 million		
2. Provide local cost financing including PL-480 Title III taka generations.	2. 3.000		

Brief Historical Events Related to Higher Agricultural Education in Bangladesh

The events below give the reader a sense of time frame in the progress of educational development related to agriculture in Bangladesh. These events do not constitute all the events that might appropriately be listed here. They do represent those that came to attention during the PID preparation stage. The validity of the dates may also be in question, but in any event the hope is to give the reader a feel for development timing.

Year	Event
1922	Two agricultural schools established in then Bengal.
1938	Bengal Agricultural Institute established at University of Dacca. After independence was called Bangladesh Agricultural Institute (BAI).
1961	East Pakistan Agricultural University, now known as Bangladesh Agricultural University (BAU), opened in 1961-62, on site of then East Pakistan College of Veterinary Science and Animal Husbandry. Under oversight of Ministry of Education.
1961	Faculties of Veterinary Science and Agriculture were established (now have 6 and 17 departments, respectively.)
1962	Faculty of Animal Husbandry started (now 5 departments).
1962?	USAID provides institutional development assistance to BAU for 6-7 years.
1963	Faculty of Agricultural Economics and Rural Sociology formed (now 5 departments).
1963	Selection process for head of department at BAU changes from criterion of most senior member of faculty on a permanent basis to a two-year rotational arrangement among the senior teachers.
1964	Faculty of Agricultural Engineering and Technology established (now 4 departments).
1965	BAI affiliation changed from Dhaka University to BAU.

1965	1965-75. Master plan outlined academic program as follows: (1) teaching undergraduates and post-graduates; (2) research - fundamental and developmental (mainly purposeful and problem-oriented); (3) pre-service and in-service training in extension (organization and methods); (4) refresher courses - for lower level teachers in rural science; (5) short courses - particularly for public servants of all levels.
1966	Bureau of Socio-economic Research and Training established.
1967	Faculty of Fisheries was established, but not activated until 1972 (now has 3 departments).
1968-70	First IDA credit for BAU infrastructure.
1970	Directorate of Agriculture Extension and Management established.
1970	Department of Agricultural Extension and Management (DAEM) and the Department of Agricultural Research and Education (DARE) organized within Agriculture.
1972	BAU Calendar last officially revised.
1972	Bangladesh Agricultural Research Institute (BARI) and the Bangladesh Rice Research Institute (BRRI) started.
1974	Bangladesh Agricultural Research Council (BARC) established.
1975-78	Second IDA credit for BAU infrastructure.
1976	Agri-Varsity Extension Project started under Department of Agricultural Extension and Teachers Training.
1976	Graduate Training Institute (GTI) at BAU established to provide in-service training of agency employees or other BAU graduates under IDA credits.
1979	Patuakhali Krishi College (PKC) established through local financing.
1982	Coordinator of Advanced Studies and Research (CASR) established to coordinate graduate research at BAU.

1983 Construction completed of Bangladesh College of Agricultural Science (BCAS) at Joydepur near BARI and BRRI.

1983 All agricultural colleges, universities and institutes were put under the oversight of MOA; BAU directly, BAI, BCAS and Patuakhali through BARI.

1983 BCAS was established to subsume BAI, but the decision was made to change its function to post-graduate training, so it became the Institute for Post Graduate Studies in Agriculture (IPSA).

1983 Draft Development Plan - 1984-1990 prepared by BAU's Development Plan Committee, December.

1983 Unified extension service established by bringing together the several commodity or monocrop extension organizations to form the Department of Agricultural Extension within the MOA - all integrated with DAEM.

1983 Review of Irrigation Water Management Program at BAU by Cornell University and Colorado State University team.

1984 Bangladesh Agricultural University Research System (BAURES) established to manage all fundamental and applied research carried out by units of BAU.

1986 BAU placed back under MOE oversight.

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