

CLASSIFICATION PROJECT EVALUATION SURVEY (PES) - PART I

Report Symbol U-34:

1. SUBJECT TITLE AGRICULTURAL EDUCATION FOR DEVELOPMENT	2. PROJECT NUMBER 497-0260 Loan # 497-041	3. MISSION/AID/W OFFICE USAID/I-EHR
	4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 81-3	

5. KEY PROJECT IMPLEMENTATION DATES			6. ESTIMATED PROJECT FUNDING		7. PERIOD COVERED BY EVALUATION	
A. Final P/O-AG or Equivalent FY 10 77	B. Final Obligation Expected FY 10 77	C. Final Input Delivery FY 88	A. Total \$	B. U.S. \$ 5,500,000	From (month/yr.) 4/79	To (month/yr.) 7/80

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR		
A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., program, SPAR, P/O, which will present detailed request.)	E. NAME OF OFFICER RESPONSIBLE FOR ACTION	C. DATE ACTION TO BE COMPLETED
1. Project Assistance Completion Date (PACD) extended to 15 July 1982. (Action completed Jan. 26, 1981.)	Clayton Seeley	Jan. 26, 1981.
2. Scope of work for short-term expertise prepared for FY 1981 which will indicate consultants, host-universities and KIP responsibilities.	MUCIA	Oct. 1, 1981.
3. Madison office to maintain closer contact with participants and their advisors during period of thesis preparation.	MUCIA	Jan. 1, 1981.
4. Embassy GSA to compile charges for housing project personnel and present billings to project on a timely basis in future.	EMB/GSA	Oct. 1, 1980.
5. Clearance procedures for project commodities to be regularized and goods arriving in future should be received/cleared/delivered in a timely manner.	GOI/MUCIA/USAID/EHR	July 31, 1980.
6. Semiannual academic progress reports to be prepared and submitted on in-country Ph.D. participants.	MUCIA USAID/EHR	Oct. 1, 1981.
7. Establish uniform management procedures for in-country M.A. and Ph.D. programs.	MUCIA	Oct. 1, 1981.

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS	10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT
<input type="checkbox"/> Project Paper <input type="checkbox"/> Financial Plan <input type="checkbox"/> Logical Framework <input checked="" type="checkbox"/> Project Agreement <input type="checkbox"/> Implementation Plan e.g., CPI Network <input type="checkbox"/> P/O/T <input type="checkbox"/> P/O/C <input type="checkbox"/> P/O/P <input type="checkbox"/> Other (Specify) <input type="checkbox"/> Other (Specify)	A. <input type="checkbox"/> Continue Project Without Change B. <input type="checkbox"/> Change Project Design and/or <input type="checkbox"/> Change Implementation Plan C. <input type="checkbox"/> Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Name and Title)
- Robert Schmeding, Chief EHR
 - A. Thivierge, PRO
 - R. Bourquin, Chief OMF R13
 - Yuhara Sukra, GOI Representative
 - Kenneth Harshbarger, MUCIA Representative
 - R. Cohen, PRO
 - P. Gage, PRO
 - E.C. Seeley, EHR

12. Mission/AID/W Office Director Approval

Signature:

Typed Name: Thomas C. Niblock, Director

Date: March 3, 1981

13. Summary

A. Background. This project is to develop and strengthen selected institutions of higher learning into mature scientific agricultural centers promoting national development programs. Two of the universities were selected to play the major roles: The Bogor Agricultural Institute (IPB) and Gadjah Mada University (UGM) in Yogyakarta. These two were to start pilot projects and programs which could, if proved successful, be replicated in six provincial universities (Padjadjaran University, Bandung; Brawijaya University, Malang; North Sumatra University, Medan; Andalas University, Padang; Udayana University, Denpasar; and Hasanudin University, Ujung Pandang). IPB and UGM were also to start graduate programs to provide qualified staff for the other universities as well as to provide top agricultural leaders for the country.

The need for professional resources is acute in Indonesia, particularly in the agriculture sector. A study in 1975 showed that almost 20,000 professionals were needed for important agricultural positions in the government and private sector, but fewer than 7,000 professionals were available. This project is to help Indonesia to develop the institutional capability to produce the quality and the quantity of professionals needed to fill this vital manpower gap.

The project has 5 sub-projects or programs: (1) to develop a 4-year undergraduate curriculum; (2) to develop graduate programs (primarily at IPB and UGM); (3) to upgrade university administrative organization; (4) to help develop effective community service programs, and (5) to develop practical agricultural research programs.

It is to accomplish its objectives by training university professors to the MS and PhD levels in the U.S., in third-countries, and in-country. It offers U.S. expertise through long and short-term consultants, and supports the programs with necessary research, and laboratory and library materials.

B. Current status - Undergraduate curriculum. At the beginning of the project in 1976, IPB was the only university among the eight universities covered in the project that used the four-year, 140-credit undergraduate curriculum (in five of the six faculties; the Faculty of Veterinary Medicine was still following a 5-year, 186-credit undergraduate curriculum). The four-year program started in academic year 1974. Other facilities of project universities now have adopted the four-year undergraduate instruction program as follows:

- USU - Agriculture: 4½-year, 153-credit program started in 1976.
- UNHAS - Agricultural Sciences: 4-year, 150-credit program started in 1977.
- UNAND - Animal Husbandry: 140-160 credit program started in 1977.

UNIBRAW - Agriculture: 4-year instruction started in 1979.

IPB - Veterinary Medicine: 4½-year, 185-credit undergraduate instruction started in 1977.

The Government Decree (i.e., S.K. Menteri P&K No. 0124/U/1979, dated 8 June 1979) accelerated the adoption of the 4-year program at the two following universities:

UNUD - Agriculture: 156-160 credit program began in 1980.

UNPAD - Agriculture: 4-year program started in 1980.

Upto the 1980 academic year, certain faculties of universities included in this project are still carrying out a five-year program requiring approximately 180 credit hours:

- UNAND - Agriculture
- UNPAD - Animal Husbandry
- UNIBRAW - Animal Husbandry and Fisheries
- UNUD - Animal Husbandry and Veterinary Medicine
- UGM - All six faculties of the Agrocomplex

C. Graduate program. In accordance with the policy of the Directorate General of Higher Education, beginning with FY 1977, graduate programs leading to MS and PhD degrees must be conducted at IPB, UNPAD and UGM. The following table indicates when graduate programs in seventeen disciplines got underway in these universities.

S U B J E C T	I N S T I T U T I O N					
	I P B		U G M		U N P A D	
	Year		Year		Year	
	MS	PhD	MS	PhD	MS	PhD
Biology	1976	1978				
Applied Statistics	1976	1978				
Medical Entomology	1976	1978				
Veterinary Science	1976	1978	1980/1981			
Agricultural Economics	1976	1978	1980/1981		1980/1981	
Soil Science	1976	1978	1980/1981			
Animal Science	1976	1978	1980/1981			
Agricultural Extension	1976	1978				
Environmental Science	1976	1978				
Reproductive Biology	1976	1978				
Agro. Meteorology	1976	1978				
Agricultural Engineering	1976	1978	1980/1981			
Plant Entomology	1976	1978	1980/1981			
Phytopathology	1976	1978	1980/1981			
Food Science	1976	1978	1980/1981			
Agronomy					1978	
Plant Science	1976	1978			1980, 1981	

Graduate programs, including both course work and research, have been started at IPB (MS since 1976; PhD since 1978).

At the PhD level, UNPAD and UGM still apply the old system, where for the large part, research work is the only focus. At UNPAD and UGM an office to manage the PhD program is established.

Within Loan 041 there are 53 participants receiving in-country PhD fellowships. Since the program started, three participants have completed their programs at IPB and two at UNPAD. None has graduated from UGM.

D. University administration. The objective of the program in university administration is to create a system which makes the most effective use of staff and other resources in achieving the goals of the university.

The general activity in some universities is to centralize the university administration, although the faculties still have their limited autonomy in regards to student enrollment, library development, credit system development, doctorate program, non-academic staff training and so forth. Improvement of educational administration is being accomplished by more effective utilization of modern equipment. The development status of each university/institute differs.

Based on the Surat Keputusan Menteri P&K No. 0124/U/1979 - the Educational Stratification and Teaching Act - each university/faculty should follow the stratification and credit hour requirement of each stratum.

The Government Rule, PP No. 5/1980, issued in 1980 concerning university/institute organizational structure, encourages each university/institute to carry out a step by step reorganization.

E. Research. The increasing budget obtained by the Directorate General of Higher Education (DGHE) in recent years has contributed to growth in research activities at the eight universities involved in the project. The DGHE policy of research focuses on three aspects:

1. increased research capability of junior faculties;
2. research activities to develop science and technology; and
3. research to support national development.

Within the last three fiscal years (1977, 1978, 1979) 292 research projects in animal and plant sciences were completed by six member institutions. Data from IPB and UGM are unavailable at this writing.

In accordance with the new Government Regulation 5/1980 on Structure and Organization of Universities/Institutes, a central office on research activities will be established, titled the Institute for Research. Every university will have such an institute responsible to the Rector. Project efforts to improve research will now be handled through these institutes.

I. Baseline Study of Higher Agricultural Education in Indonesia. The Baseline Study and Long Range Plan is nearly finished. Computer processing of data has been completed. The first three sections (94 pages of text) of what is to be a six-section final report are completed. Rough drafts of the next two sections are written and under review or are being revised. A review copy of the first five sections should be completed by 31 July. A draft copy of baseline data (including just over 50 tables of descriptive data) will be completed by 18 July.

J. Consultants. Short-term consultants for this project are:

	<u>Field</u>	<u>Consultants</u>
Previous	{ Undergraduate Curricula Undergraduate Curricula Graduate Instruction	Dr. Austin Ritchie Dr. Karl A. Gardner Dr. Clarence Minkel
This reporting period	{ Teaching Methodology Forestry Educ./Research Plant Science	Dr. Franklyn Bobbitt Dr. Edward I. Sucoff Dr. John Pendleton
Planned	{ Animal Sciences Fisheries Research Management Agriculture/Engineering	Dr. U.S. Garrigus Dr. Clarence McNabb Dr. Lynne S. Merritt Dr. Merle Esmay

14. Evaluation Methodology

The annual evaluation/review, held March 18-20, 1980 in Bogor, was in accordance with the Evaluation Plan detailed in the Project Paper. The Annual Review is a meeting of leaders from the Consortium, the Directorate General of Higher Education, and the eight universities, with representatives from both MUCIA/Madison and MUCIA Indonesia and A.I.D. joining together to analyze the reports presented, and on the basis of such findings, to plan the project activities for the coming year. The review was published in an Annual Report of 474 pages which is included as an attachment to the file copy of this Project Evaluation Summary. For the review, each of the eight universities included in the project made a report of its progress in the areas of undergraduate curriculum, graduate curriculum, research, and community service. The Consortium for Agricultural Sciences (KIP) of the Directorate General for Higher Education and the Contractor (MUCIA) also made reports concerning the overall project inputs and outputs for the year.

Monthly Project Policy Steering Committee (PPSC) meetings were held to review implementation plans, participants progress, consultant reports, financial concerns and other related operational procedures. MUCIA, KIP, Director General of Higher Education and AID/EHR personnel joined in these planning/implementation/evaluation activities. More than one dozen visits to project universities were also made by PPSC members.

During the current evaluation period, Loan 041 was audited by AID regional auditors. The draft report was reviewed by the Mission on June 12, 1980. The final report and recommendation have not yet been received. The audit concentrated on project management because financial records are maintained in the United States. Major concerns centered around the project's practice of offering successive degrees to about half of the participants, commodity management, and payment of an AID/W fee for health insurance and amenities. These concerns will be discussed later on in this paper. However, substantial progress is already being made to clear these anticipated audit recommendations. The 1981 PES will review Mission actions in respect to all such recommendations.

An indepth evaluation by AID/W or other outside evaluators is scheduled for CY 81, to assess progress with the project's stated purpose and end-of-project conditions. It is hoped that this evaluation will also focus on the project's social impact on the communities served by participating universities. A general outline for this evaluation was approved at the March 1980 Annual Review in Bogor. Copies were sent to AID/W. At one time this review had been scheduled for 1980 third quarter action. Apparently it has been delayed for funding reasons. EHR will again request information as to its present status.

This project evaluation summary (PES) was prepared collaboratively by the Project Manager, Dr. Clayton Seeley ; the MUCIA representatives, Dr. Kenneth Harshbarger and Dr. Monte Juillerat; Dr. Kusmat Tanudimadja, Executive Director of KIP; and Dr. Yuhara Sukra, counterpart officer from the Directorate General of Higher Education.

15. External Factors

The GOI is increasing funds to university development budgets. All universities have received special additional funds for laboratory equipment and for construction. Still further increases during FY 1980-81 are to be made.

The GOI gives the project high priority as shown by the fact that the counterpart organization to the contractor, the Consortium for Agricultural Sciences (KIP), has the full support of the Ministry of Education. Up to 1978 the project was considered so important that the KIP was headed by the Assistant Director General of Research in Higher Education, Dr. Achjani Atmakusuma. He recognized that the project needed someone who could devote more time to it, and a senior professor and returned USAID participant from IPB, Dr. T. Kusmat, was named to head the KIP. Dr. A. Atmakusuma continues to give the project his full support. The KIP budget has been increased each year to provide for a larger secretariat.

Validity of Log Frame Assumptions of Purpose.

A. The higher agricultural education institutions are able to initiate and maintain the systematic plans.

Valid: Salaries of staff participants are being maintained. New staff have been hired to fill vacancies left by participants and to fill increasing enrollment demands. Returning participants are being placed in key positions as planned.

B. Government financial support is provided to agriculture universities.

Valid: Support in real monetary terms (above inflation) has increased each year. University professional staff received a 50% salary increase in 1979-80. Provincial governments are making direct grants to agriculture related faculties for research, equipment and buildings.

C. Agriculture retains the high level of interest for both undergraduates and graduate students and the national sector continues to absorb graduating students.

Valid: Enrollments have continued to increase and graduates have no trouble being placed. A draft IBRD report (July 1980) clearly indicates the pressing need for agriculture graduates at all levels. It projects that BA level degrees may soon be in balance but that demand for high level MA and PhD degree holders and for lower level "diploma" (non-academic degree) holders will far exceed supply for many years.

16. Inputs

A. Technical services. Dr. Kenneth Harshbarger replaced Dr. John Medler as Chief-of-Party and Dr. Monte Juillerat continued as Project Associate and principal advisor to the KIP. A schedule of past and projected short-term advisors follows:

In previous years 3 short-term consultants provided technical assistance to upgrade educational programs as follows: Dr. Karl E. Gardner, undergraduate curricula, Dr. Austin Ritchie, undergraduate curricula, and Dr. Clarence Minkel, graduate instruction.

As a follow up to the above consultancies, during this reporting period Dr. J. Franklin Bobbitt conducted three workshops on Teaching Methodology at three universities during the months of July, August and September, 1979. The representatives from 22 universities attended the workshops to learn more about methods of improving instruction and to extend the information to each representative's home university. A summary report and detailed report on Teaching Methodology have been distributed to the Agricultural Faculties.

Dr. Edward I. Sucoff served as a short-term consultant from January 18 to March 18, 1980 on Forestry Education and Research, at Mulawarman University and Bogor Institute of Agriculture. A report of his activities is in the process of being published.

Dr. John Pendleton is now serving on a short-term assignment from May 17 to August 16, 1980, to provide technical help in the Plant Science area. He is assisting with curriculum development and research methodology and planning at University of North Sumatra and Andalas University.

All of the short-term consultants serving the Agriculture Education Project were competent and very effective in providing a foundation for further development in instructional and research programs.

In accordance with MUCIA's work plan, four additional short-term consultants are scheduled. All will complete their services during FY 1980.

Dr. U.S. Garrigus, Animal Science - September - December
Dr. C.D. McNabb Jr., Fisheries - September - December
Dr. Lynne L. Merritt, Jr., Research Management - October - December
Dr. Merle Esmay, Agriculture Engineering - October - December

Problem. Although identified in the 1979 PES as a constraint to effective use of short-term expertise, pre-planning with participating universities still needs to be improved. A collaboratively planned, detailed scope of work, designating consultant, host-university and KIP responsibilities and phased implementation, would greatly enhance consultant effectiveness. AID/EHR has advised both MUCIA and GOI that Mission clearance will not be granted for further consultants until such scope of work have been developed.

B. Contractor Management/Backstopping. The performance of the Midwest University Consortium for International Activities must be rated as superior. MUCIA maintains an efficient office in Jakarta as well as adequate backstopping in Madison, Wisconsin. Dr. Kenneth Harshbarger, Chief-of-Party, is an able administrator as well as a renowned animal scientist. His mature judgement and regard for operational detail are highly respected by his Indonesian counterparts. Dr. Monte Juillerat, Associate Director, likewise is well respected for his ability as an agricultural economist and researcher. Both of these men understand development and work well with their counterparts. They use their experience and knowledge to help identify problems, design project activities and evaluate results. They lead, offer advice and support counterparts' decisions, taking appropriate part in necessary actions. They avoid the often easier path of least resistance, of "taking over" and making decisions for their Indonesian colleagues.

The Madison office has improved its efforts in maintaining closer contact with participants and their advisors during the thesis research period when periodic progress reports are scarce. Still more might be done in this area, however.

Summary. financial reports from Madison are made quarterly but lack specificity needed for contract field management because detailed vouchers are submitted to AID/W and not the field. Because this loan project is an extension of a previous grant project, the financial records of the grant were continued in the same accounts under the loan. This added somewhat to the confusion. During the current reporting period the grant account was closed off, so now only loan figures are reported.

Financial records for GOI contributions are kept in Indonesia. These inputs are mostly up-to-date. The Housing Account for Dr. Juillerat and the utilities/maintenance account for Dr. Harshbarger and the MUCIA office constitute the only present problem. Both use facilities under Embassy General Administrative Services (GSA) contracts, but neither AID nor the GSA has billed the project for more than a year. These expenses are to be paid from the GOI trust fund and not loan funds. This may constitute a problem for the GOI as the retroactive charges now amount to approximately 85 thousand dollars and are based on US government "average" charges rather than against specific expenditures. Such a large sum will be difficult to cover if it is not included in the current GOI budget.

C. Commodities. As shown by the chart included in the Summary section, all commodity orders have not been placed. MUCIA has expended \$1,087,553 for goods, shipping, handling and insurance charges to date. Of these, \$481,490 or 44 percent have been delivered to universities, \$306,435 are still in customs and \$299,629 have not yet arrived.

Problem

1. As noted in the auditor's draft report, commodities are to be in accordance with the publication "MUCIA/INDONESIA LIFE CYCLE COMMODITY MANAGEMENT SYSTEM", according to PIL No.1. This system apparently has never been completely understood by all universities. MUCIA and KIP have notified each university of these requirements by KIP letter No. 161/SCAS/VI/1980 dated 21 June 1980, and visits are being scheduled to each university to bring the SYSTEM up-to-date. MUCIA monthly commodity reports, required by the SYSTEM, have been regularly and correctly issued. The follow-through and management requirements, however, need to be up-dated. Of particular importance are the procedures for reporting damaged goods and problems of installation and missing parts to make equipment completely operable.

2. Also noted in the draft audit report: there has been a clearance problem in getting goods out of customs. Because of duty-free status, additional signatures including that of the Chief of Customs must appear on the documents before final clearance is granted. The complex network of custom clearance procedures in Jakarta is not easily traceable or affected. This is an internal GOI problem of greater magnitude than the requirement of this project. Officials of the Directorate General of Higher Education are working on this problem. The procedures should be regularized by 31 July 1980, and all items presently in customs delivered to the universities shortly thereafter. USAID/EHR will participate with the GOI and MUCIA in confirming that goods received are cleared and delivered in a timely manner.

D. Participant training - overseas. A total of 97 participants have received financial support for graduate study in the United States under the Agriculture Education for Development Project. About half of the participants (51) were transferred to this project from the previous grant program. Thirty-four have returned to Indonesia, all with advanced degrees except one. Thus, the participants have been very successful in completing their graduate degree programs. A chart showing the distribution of candidates by university of origin and university of training in the United States is found in the appendix.

Approximately two-thirds of the participants still remain in the U.S. on degree programs. With the scheduled termination of the project in March 1981, and the total time required to complete some research degrees, it is clear that several participants cannot complete all degree requirements within the current time limit. It is estimated that 30 participants will need additional study time after March 1981. Allowing for some programmed transfers to other projects at least 157 man-months of additional training will be required.

If funds are available, it is recommended that the PACD be extended for 12 months until 15 July 1982, to permit all university staff member participants to complete their degrees and return to their Indonesia universities as projected on the Status Report dated 7 July 1980. (A copy of this report is appended to the official file of this PES.)

Problem. Study for successive degrees is frowned upon in AID Handbook 10, Chapter 3, which states "Successive degrees are not programmed," and then goes on to say "Exceptions require full justification." Because of this apparent ambiguity, however, the Mission has interpreted this to mean that the Mission should justify exceptions. In this loan, of the 97 persons scheduled for advanced training, 29 were enrolled only for an MS, 46 are to receive both MS as well as PhD successive degrees, and 22 who already possessed an MS from the U.S., are scheduled for their PhD. A major aim of this project is to develop the ability of certain Indonesian universities to grant graduate degrees. Graduate programs must be designed and largely taught by PhD holders. As there is a great lack of eligible candidates who already have earned their MS, the purposes of the program could only be met by selected successive-degree training. Each such student permitted to continue for a PhD after earning an MS degree, on a case by case basis, met exacting criteria set up by the GOI and USAID before being allowed to continue for his PhD after receiving the MS (see appendix). As the Auditor questions this Mission interpretation, the Asia Bureau will be asked to clarify the issue.

E. In-country PhD training. Five degrees have now been awarded to participants of the In-country PhD Program. Out of the 55 original trainees assigned to this program, five have graduated, one withdrew and one died. It now appears that six to 12 months of additional time will be needed to complete the degrees of more than half of the participants. However, this training program is expected to increase capability of the faculties of several universities to provide higher quality instruction and research programs. The GOI has expressed willingness to fund the extension of the in-country degree programs as necessary, so that all participants may finish their research projects, projects which have been carefully selected to impact on Indonesia's agricultural development.

IPB has progressed further than Gadjah Mada or Padjadjaran in developing criteria and procedures for degree training in line with general criteria recommended by the Directorate General of Higher Education. In-country MA and PhD degrees are new and are going through a difficult major change of educational philosophy from the Dutch to American systems. Each university is facing this turbulent situation in its own way and rate of speed. Much progress has already been made; however, neither AID nor the GOI can legislate

these changes. The percentage of degree completion for in-country training will not be as high as for US training, due largely to the academic changes taking place. With a one year extension of the participant portion of the project, it is anticipated that 44 of the 54 participants (81 percent) will complete their training. Those ten who will not complete their programs by March 15, 1982, include the six who have not yet started training.

Problem. Progress of participants in the in-country PhD program has not been as well monitored as that of participants studying overseas.

USAID/I and MUCIA are seeking to obtain not only semi-annual academic progress reports for in-country participants, but more substantial and uniform management procedures and academic requirements for all MA and PhD programs. Such changes require in-depth involvement of many people. Several meetings have been held during the past two years by the Directorate General of Higher Education with constructive results. Academic progress reports for AID funded participants will begin this year.

17. Outputs

Progress has been made in meeting project outputs as follows:

1. Basic 4-year B-Science Curriculum installed at six "non-pembina" Universities. By the end of CY 1980 a complete study will be made of the curricula at these universities. The Summary section notes briefly progress made to date at USU, UNAND, UNIBRAW, UNUD and UNPAD.
2. Initiation of post graduate programs at "pembina" Universities. The chart included in the Summary section 13 shows that not only the two "pembina" universities but also Universitas Padjadjaran, are initiating an increasing number of Masters and Doctorate programs.
3. Returned participants join faculties at universities in "Nuclear" group of 8 universities (2 pembina + 6 provincial). Most of the participants will complete their studies and return to Indonesia by March 1981. A detailed study of returned participants has been delayed until then. All 34 participants returned to date have been readily assimilated by their universities.
4. University programs of rural/community service established and operating. The numbers of university students involved in community service projects has increased according to information supplied by the Government. This increase is not only due to project efforts, of course, but the project has paid special attention to community service programs. A four day seminar for representatives of all eight project universities, plus the Konsortium for Agricultural Sciences (KIP), was held in June 1980. This seminar focused on planning and implementation activities for such programs.

5. University programs of applied agricultural research established and operating. Universities are focusing on applied research. Due to generally shorter time requirements, such research may be conducted by students during their semester study. As an example, more than 290 research projects were conducted in animal and plant sciences at the projects' six provincial universities from 1977 to 1979.
6. Physical facility development appropriate for programs of teaching, research and service. The five-year development plan for expanding and improving university facilities is being effected. All project schools have received new buildings and laboratories.
7. Implementation of national plan for higher agricultural education. Not only A.I.D. but the I.B.R.D., A.D.B., Ford Foundation, Rockefeller Foundation, and other foreign donors are assisting the implementation of this plan. Last year the USAID funded regional program for eight of the Eastern Islands universities was initiated. A somewhat similar program stressing agro-science development is now being designed for the Western Provincial universities (mostly in Sumatra), and like planning is expected to extend to the Nusa Tenggara region by FY 1982. The Government of Indonesia is expected to increase its financial contribution to such programs from 35% to 50% of total project costs during the coming year.
8. Effective university administrative systems developed. Some training under this and other USAID projects is focused on improving university administration. Most participants studying in the U.S. have some form of administrative intership built into their study programs. GOI plans for development of an advanced institution for training university officials are well underway.

18. Purpose

Purpose is, "to establish a nuclear group of agricultural universities with the capacity to provide highly qualified agricultural manpower, research and public services activities appropriate to Indonesia's needs."

- (a) EOPS 1. At two leader universities fully established graduate programs with 100 graduate degrees each year. Both the IPB and UGM are meeting this target.
- (b) EOPS 2. Basic 4 year B.Sc. curriculum fully established at a minimum of 4 schools with annual graduation of at least 600 students. Basic 4 year Bachelor of Science curricula in agro-sciences are established at all 8 projects. Graduates of these programs will not be known during the life of this project. However, present enrollment figures indicate that total graduates will exceed the target of 600.

(c) EOPS 3. Targeted increase in percentage of faculty with PhD qualifications:

1. IPB up to 12% by 1981 (approx. 73 PhDs in a total faculty of 400)
2. GMU up to 8-15% by 1981 (approx. 40 PhDs in a total faculty of 250)
3. Provincial universities up to 3% by 1981.

The special evaluation to be conducted by AID/W ~~later this year will~~ address this target. A total of 122 new PhD holders and 29 new MS holders is scheduled under both US and in-country training programs.

(d) EOPS 4. Group of project universities serving as base for upgrading entire higher agricultural education system according to well-coordinated national plan.

The plan as originally established in the late 1960's was to develop two centers of excellence, IPB and GMU, and the MUCIA contractor and the Consortium for Agricultural Education limited their project activities to those two institutions until 1972.

In 1972 the six provincial universities were added. The work of the Consortium for Agricultural Education and the contractor up to this year was primarily with the individual institutions. The MUCIA consultants worked at a university to help it upgrade its program.

In 1977 the program was changed to use the consultants to develop the national program and to work at several institutions. The project universities are to serve as the growth universities to help the surrounding area universities. Hasanuddin (UNHAS), for example, has become the growth university, giving leadership to the seven other Eastern Islands Association Universities in the Eastern Islands Agriculture Education Project which was begun in 1979. Likewise, the University of North Sumatra (USU) and Andalas (UNAND), are providing leadership to the development of the Association of Western Universities (BKS-Barat) with its nine member institutions. The Sumatra Agricultural Education project, now being designed, will upgrade these universities. The last regional association anticipated is that of Nusa Tenggara, which will include the remaining provincial universities in East Java and the South Eastern Islands.

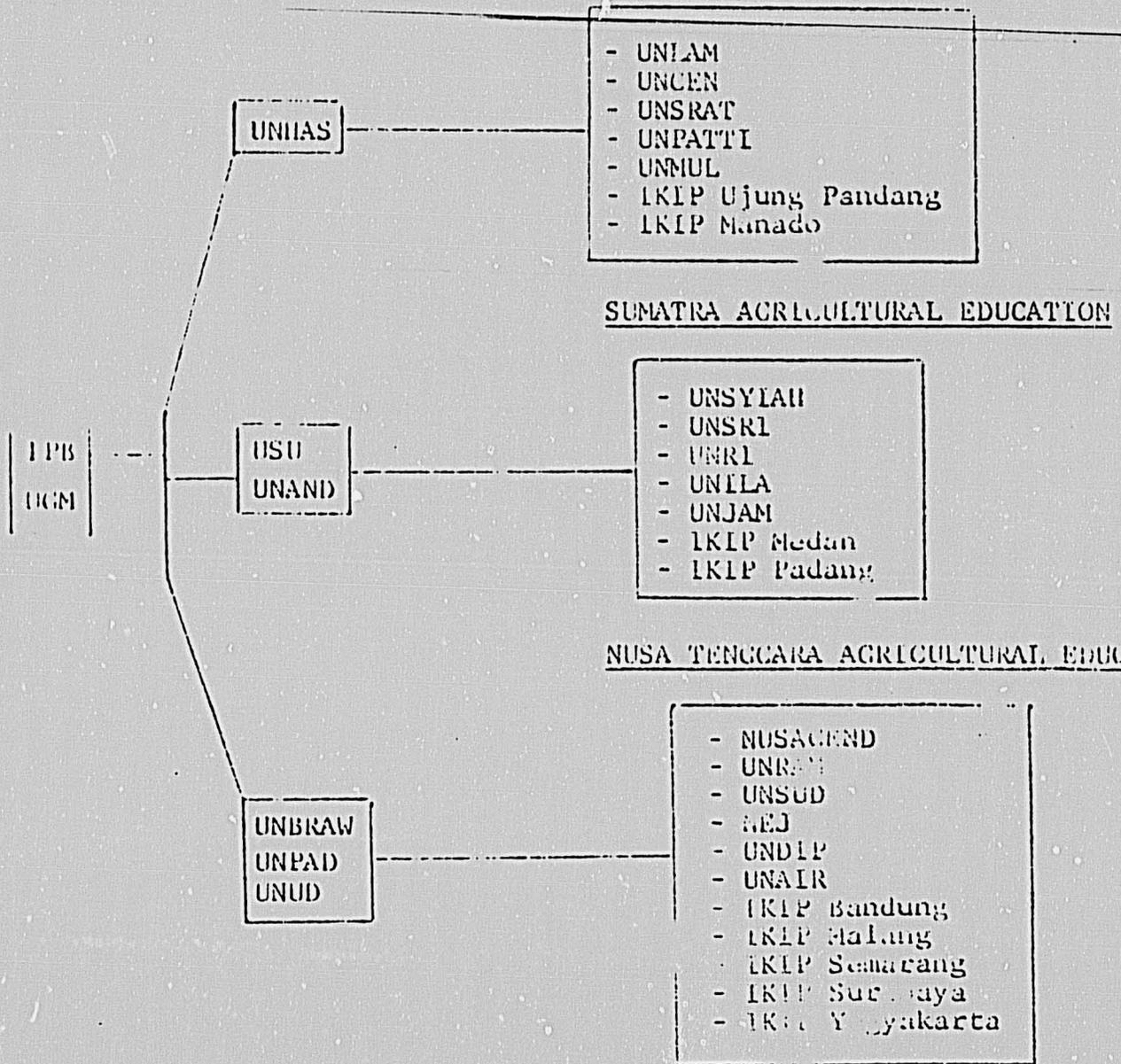
Brawidjaja, Padjadjaran and Udayana will be the growth universities under this project, which AID plans to assist in FY 1982/83.

(e) EOPS 5. University faculties effectively supporting and supplementing government programs of agricultural extension, research and service.

Expansion of Agricultural Education Movement
 Showing Spread Effect of Integrated
 Agricultural Capability

AGRICULTURE EDUCATION FOR DEVELOPMENT

EASTERN ISLAND AGRICULTURAL EDUCATION



* These universities not yet determined by GOI.

Excerpts from the reports presented at the Annual Review, March 18-21, 1980 show how project inputs are strengthening member universities to fulfil their EOPS - each in its own way. Constraints to project effectiveness are also mentioned.

I. University of North Sumatra

A. General

1. Administration:

- training of lecturers in teaching methodology
- Training of library staff members in library development
- activate the Curriculum Management Body and the Credit System Team with regards to the 4½ years undergraduate program.

2. Instruction:

The Faculty of Agriculture is expected this year to produce the first graduates who participated in the 4½ years program.

3. Graduate Program:

It is planned that in 1981 a post-graduate school in the field of soil science will be established.

4. Research:

25 types of research were carried out in 1979/80.

5. Training:

- two lecturers were sent to UGM to study land mapping and aeral photography funded by the Dept. of Education and Culture
- one participant is still studying for his doctoral program in agronomy at IPB under AID loan
- also now in training under different sponsors:
at IPB - 5 for MS degree and 1 for doctoral degree
Australia - 1 for MSc degree.

B. Faculty of Agriculture

1. Participant training:

- four teaching staff members took the TOEFL test at the Lembaga Indonesia Amerika in Medan last February 1979. Only two passed the test.
- in June 1979 two teaching staff members were sent to Universitas Gadjah Mada to study land mapping and aerial photography. Funds were provided by the Dept. of Education and Culture.
- one participant is studying in IPB Bogor for his doctoral program in agronomy (Ir. J.A. Napitupulu M.Sc.)

II. Andalas University

A. Faculty of Agriculture

Assistance to the Faculty of Agriculture UNAND from MUCIA-AID HAE program are in staff development, library improvement and provision of laboratory equipment.

1. Staff development

In 1979/80, the Faculty of Agriculture of UNAND received fellowships for two staff members, one for in-country training and another for study abroad. Ir. Firdaus Rivai M.Sc., has been studying since 1976 at the North Carolina State University, and is expected to return in mid-1980. Ir. Asril Samad is still studying for his MS degree at the SPS-IPB Bogor, and is expected to complete his study in 1980. Therefore, additional funds are required until the completion of his MS degree and if possible to continue funding until his doctoral degree. Ir. Syuhinar Bustami was approved by the KIP to study at the SPS-IPB Bogor in 1980 under MUCIA-AID funds. His acceptance by the SPS-IPB has been deferred pending solution of the funding problem.

2. Library improvement:

Since 1975/76 no books have been received from MUCIA-AID. It was only at the beginning of 1980 that 23 books consisting of 2 titles received.

B. Faculty of Animal Husbandry

1. Library improvement:

- received twenty-four books consisting of 17 titles
- magazines/journals: 169 pieces with twenty-five titles.

2. Manpower development:

In-country training for one staff member (Ir. Rusjdi Saladin) for Pasca Sarjana program at the IPB.

3. Commodities:

Received copy of shipment of commodities dated 15 August 1979 amounting to \$2,165, but so far have not received the commodities. Faculty of Animal Husbandry has not received Order No. VAJ.327-K-471 amounting to US\$2,363.57.

4. Research:

Eight staff members were given training in research in 1979/80.

III. Padjadjaran University

A. Faculty of Agriculture

Staff development. The 1978 participants who are still studying abroad under MUCIA number nine, and three 1978 participants have returned with the PhD degree. Because the loan to fund the above participants still studying abroad will end in March 1981, additional funds should be sought to enable them to complete their studies.

B. Faculty of Animal Husbandry

MS/Doctoral Program:

In-country training - out of three participants, one has completed his study.

Training abroad - one participant has been studying at the University of Minnesota since March 1979. (Ir. Rini B. Sudjono).

One participant is studying at the University of Wisconsin since January 1980. (Ir. Harun Djuned)

IV. Brawijaya University

A. Faculty of Agriculture

1. The assistance from MUCIA for the Faculty of Agriculture of UNIBRAW is in the form of equipment for student's practical work, books for the library, and upgrading of staff in the United States of America.

Early in 1979, there was a short visit by Dr. A.E. Ritchie, who helped FP UNIBRAW in curriculum development and students' counselling. This visit was very helpful, especially because FP UNIBRAW started a four-year degree program in 1979.

In fact, the assistance from MUCIA is very very helpful for the development of the faculty. The ultimate objective of the faculty development program is to achieve a standard that FP UNIBRAW could develop itself almost automatically, and to be successful achieving the plans of having an MS program in 1982 and a PhD program in 1984.

2. Library improvement. From MUCIA, FP UNIBRAW received many books on different subjects. Those books are very useful in supplementing basic textbooks for students.
3. Central workshop. From MUCIA, FP UNIBRAW also received equipment useful in students' practical work, as well as supporting staff research. Most equipment is still in good running condition. Some items were broken, but were repaired by the university workshop.

B. Faculty of Animal Husbandry and Fishery

Among MUCIA/AID activities in assisting the Faculty of Animal Husbandry and Fishery - UNIBRAW, are providing equipment for laboratories, books and journals, and consultants in academic fields; and sending participants to study for degree programs in the U.S.

V. Udayana University

A. Faculty of Agriculture

1. Participant program. Two staff members are studying for MS and Doctoral degree program : Ir. Igst Pt. Dwidja Putra in the Doctoral program at UGM, and Ir. Ida Bagus Oka for the MS degree at the IPB.

2. Short-term expert. Dr. Austin Ritchie visited the Udayana University in 1979 as a short-term consultant on credit systems.
3. Commodities. Faculty of Agriculture UDAYANA has received only part of the equipment submitted to the KIP for 1977/78 budget.

B. Faculty of Veterinary and Animal Husbandry

1. Manpower development. Three academic staff members participated in the S3 program, and one of the three is preparing his final thesis.
2. General services. Several books, reports and journals were received.
3. Short-term experts. Dr. Ritchie visited UDAYANA Faculty of Veterinary and Animal Husbandry in February 1979.
4. Commodities. Laboratory equipment received in 1979: - electronic calculator and vacuum distillator
- other commodities being cleared at the customs.

VI. Hasanuddin University

A. Faculty of Agriculture

1. Manpower development. In 1979/80 four staff of the Faculty of Agricultural Sciences have been studying for their degree program either in Indonesia or in the US. Among the four staff, three of them are taking their PhD program in Indonesia. The only difficulty they are facing so far is the lack of research funds.

The staff member currently in the US was only going to study for his Masters degree in Pest Toxicology, but after two semester, his supervisor suggested that he switch his program to a PhD.

2. General service/library improvement. In 1979/80 Hasanuddin University received 100 copies of books in Agricultural Engineering, Forestry and Fishery. The books are quite useful not only for students but also for teaching staff, because there is only a small collection of books on the three subjects at the university library.

3. Short-term expert. From August 23-September 13, 1979, Dr. J.F. Bobbitt, Professor in Agricultural Education, Michigan State University, held a workshop on Teaching Methodology at Hasanuddin University. For the workshop, fifteen participants were invited from seven universities.
4. Commodities. In 1979/80 Hasanuddin University received equipment as stated in ASK-288 (Package Course in Meat and Beef Cattle Sciences) and ASK-068/2 (Package Course in Agricultural Engineering)

Suggestion:

1. Additional funds for research at the amount of Rp.500,000 to one million could be provided for a PhD candidate in Indonesia
2. Four commodities which have been received could be equipped with certain spare parts.

VIII. Gadjah Mada University

A. Agrocomplex

1. Participant program. Sending of education personnel for degree program have been carried out according to the funds allocated (nineteen participants - five have already returned).

B. Faculty of Animal Husbandry

1. With MUCIA-AID assistance to the Agrocomplex UGM, Faculty of Animal Husbandry has achieved results in the field of education, i.e. achievement of PhD degrees by two participants and M.Sc., degrees by five students.
2. Four short-term consultants visited the Faculty of Animal Husbandry:
 - a. Animal Nutrition - Dr. Pope from Wisconsin/Madison
 - b. Dairy Science - Dr. Meadows, Michigan East Lansing
 - c. Animal Breeding - Dr. Grossman and Dr. Chapman
3. Four units of equipment such as Kyedil, Bomb Calorimeter, Atomic Absorption Spectro-Photometer and Spectro-Fluorometer were received under the MUCIA-AID funds.

19. Goal/Sub-Goal

The goal to which this project is to contribute is, "an indigenous Indonesian integrated agricultural capability for undertaking and maintaining national agricultural development (production, employment, and income distribution)."

There are many other donor and USAID projects in addition to this one, which contribute to the overall goal. Such programs are complementary and do not overlap.

The project goal is primarily to develop "an integrated agricultural capability." This capability will depend to a very large extent on the quantity and quality of the agriculturists who are trained under this project or who will train others. Both IPB and GMU graduates are in demand by the government and the private sector, showing that they have an excellent reputation. The six provincial universities have been improved so that their graduates are making important contributions at provincial levels. All graduates are placed immediately upon graduation. In all eight universities the number of graduates is increasing.

This project also contributes to the goal by challenging the universities to find ways through which Indonesian small farmers can improve crop yields so as to improve their incomes. In addition, university research is being increasingly focused on other factors which influence the small farmers' incomes, such as farm-to-market transportation, marketing practices, post-harvest food losses, and so forth.

Verified indicators of the overall goal appear to remain valid:

- Increased production up to 4.6 per cent annually.
- Real income increased in agricultural sector up to 5 per cent annually.
- Increases in rural sector job opportunities up to 13 per cent by 1979.

The IBRD Agriculture Manpower Supply and Demand Study and this project's Baseline Study are expected to provide a better basis for evaluating the validity of these goal indicators.

20. Beneficiaries

This is essentially an institutional building and infrastructure program, so that the primary concern is whether the eight institutions involved are really gaining the capability to turn out agriculturists who serve their country well in agricultural and rural development programs. The immediate direct beneficiaries of this project are the faculty members (1250) and students (current enrollment 12,000) in the agricultural programs.

The ultimate beneficiary is the multitude of small farmers who receive better service from their government because of more concerned and better trained leaders. This group is assisted in various way

The project aims to assist universities to (1) educate agriculturists who are creative and knowledgeable in dealing with the problems of the poor; (2) better serve their communities, particularly through community service programs such as the KKN, where students go out and live in villages and try to help the poor farmers; and (3) develop research programs which deal with ways to assist the rural poor.

Examples of new programs initiated at IPB which focus on rural beneficiary problems of family size and access to higher education are:

1. A special graduate program in Reproductive Biology which aims to provide leaders for certain phases of the family planning program; and
2. A special scholarship program to bring in the better students from the smaller, provincial high schools. With the recommendation of their principals such students can enter without taking the entrance test which tends to give advantage to the students who are more affluent and who have attended larger, better-equipped urban schools.

21. Unplanned Effects

There have been no significant adverse unplanned effects.

22. Lessons Learned

This project has moved along very well despite the fact that it went through a rather difficult time while it was being converted from grant to loan funding.

It was a big step for the GOI to move from grant funding to loan funding for participant training, and it was not possible to include as much technical assistance as would have been desirable for the transition period. A special problem has been providing logistic support for long-term advisors, including housing and adequate in-country travel. These requirements have placed difficult burdens on the GOI budgetary process.

This project has confirmed that institution building takes a long time. The ten year term is not at all unreasonable.

Periodic evaluation through the Annual Review has proved to be a very successful device in keeping all parties on the same way length as to the project purposes and activities. At the Annual Review all those involved are invited and urged to participate. It is a mechanism that is recommended for projects of this type.

DISTRIBUTION OF CANDIDATES

by

UNIVERSITY OF ORIGIN AND UNIVERSITY OF TRAINING

	47	26	14	1	1	2	2	1	1	1	1	1	1	98
	ITB	UGM	UNPAD	UNLAM	UNILA	UNSYLAH	UNHAS	UNSRAT	UNAND	UNSOED	UNBRAU	UNPAD	TOTAL	
Univ. of Illinois	5	5								1			11	
Univ. Wisconsin	15	3	3			1	1						23	
Univ. Michigan State	9	8	4		1		1		1				24	
Univ. Minnesota	10	7	5	1		1		1			1		26	
Ohio State University	1	1										1	3	
Texas A&M		1								1			1	
NCSU		7											8	
Oregon State University		1											1	
North Dakota State		1											1	
Colorado State University		1											1	
Univ. of California		1											1	
Louisiana State University		1											1	
University of Kentucky			1										1	
University of Washington			1										1	
University of Missouri			1	1									2	
South Dakota State Univ.				1									1	
Iowa State University							1						1	
Schools involved in training	53	27	14	1	1	3	2	2	1	2	1	1	107	
Participants	47	26	14	1	1	2	2	1	1	1	1	1	98	
Number of participants who attended two schools during US academic career		6	1	0	0	0	1	0	0	1	0	0	9	

107 - School Placement in U.S.

87 - at 5 MUCIA schools

20 - at 12 non MUCIA schools

81 % of participants experienced (are experiencing) all or some of their U.S. education at one of 5 MUCIA universities.

19 % of participants experienced (are experiencing) all or some of their U.S. education at one at 12 non-MUCIA schools.

Status of Library Improvement

<u>Universitas/Fakultas</u>	<u>Budget</u>	<u>Spent</u>	<u>Balance</u>
1. Syiah Kuala - Kedokteran Hewan/ Peternakan	2,500	4,163	
2. Sumatera Utara - Pertanian	2,500	4,899	
3. Andalas - Pertanian	2,500	4,531	
4. Andalas - Peternakan	2,500	3,539	
5. IPB	6,031 2,655	2,546 5,274	
6. Padjadjaran - Pertanian	2,500	5,140	
7. Padjadjaran - Peternakan	2,500	4,265	
8. UGM	31,203	45,283	
9. Brawijaya - Pertanian	2,500	4,967	
10. Brawijaya - Peternakan	2,500	4,208	
11. Udayana - Pertanian	2,500	5,096	
12. Udayana - Kedokteran Hewan/ Peternakan	1,307 341	1,364 536	
13. Hasanuddin - Pertanian	2,500	2,615	
	<u>\$66,537</u>	<u>\$98,426</u>	

Estimated M/M for Degree Completion, 1 July 1980

Months Needed	Number of Participants				M/M
	IPB	UCM	UNPAD	Other	
1-3	9	1	1	-	25
4-6	7	3	-	-	59
7-9	4	4	3	-	94
10-12	5	3	-	1	104
13-15	3	1	2	-	87
16-18	2	-	2	2	108
19-21	-	1	2	-	60
21 +	2	1	-	-	86
Total	32	14	10	3	623

Estimated M/M used before March 31, 1981

421

Estimated M/M used 4/81 to 3/82

157

Adjustment for transfers

45