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MUCIA/AID Project at  
The Institute of Agriculture and Animal Sciences  
of Tribhuvan University  
Rampur, Nepal

END-OF-TOUR-REPORT

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## PREFACE

The period of my association with the MUCIA/IAAS project (September of 1982 through the termination of the project in September of 1984) was an exciting and productive one. I first went to Rampur as a short-term consultant from September 27 through October 16, 1982, at which time Dr. Garland Wood of Michigan State University was completing his term as Chief-of-Party. During that period, I worked with IAAS staff on a baseline study of the IAAS Rural Development Division with a specific focus on the problems and implementation of the Pilot Extension Project.

In December of 1982, I returned to Rampur as the MUCIA long-term Rural Development Advisor at which time I had the good fortune to serve under the leadership of Dr. Marlowe Thorne of the University of Illinois. Dr. Thorne terminated his assignment prior to the end of the project, and I became the Chief-of-Party from June 1, 1984, until the end of the contract period on September 30, 1984. As well as continuing the administration of project activities, this new post involved overseeing the close out of MUCIA'S nine-year relationship with IAAS.

For what I consider a successful conclusion to the project, I owe a debt of gratitude to IAAS Dean, Mr. B. P. Sinha, and his academic and administrative staffs for their dynamic and cooperative spirit.

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THE DEVELOPMENT OF NEPAL'S INSTITUTE FOR AGRICULTURE AND ANIMAL SCIENCES:  
THE FINAL FOUR MONTHS

Herbert L. Whittier  
Chief-of-Party

INTRODUCTION

On May 31, 1984, Dr. Marlow Thorne (University of Illinois) completed his assignment as MUCIA Chief-of-Party and Plant Science Advisor with the IAAS/MUCIA project in Nepal. Dr. Herbert Whittier (Michigan State University), who had been Rural Development and Extension Education Advisor with the project since December of 1982, became Chief-of-Party on June 1, 1984, and remained in that post until the termination of the project on September 30, 1984. Thus, this report covers only the final four months of the project. The end-of-tour report submitted by Dr. Thorne (October 1982-May 1984) and the individual end-of-tour reports submitted by Animal Science Advisor, Dr. Weslie Combs (September 1982-September 1984), and by Rural Development Advisor, Dr. Herbert Whittier (December 1982-September 1984) cover the activities of the final advisory team during the last two years of the project.

Mr. Charles Doane, Director of Overseas Support for Michigan State University's Center for International Studies and Programs, provided invaluable assistance during this transition period. In the course of his three-week assignment in Nepal, Mr. Doane facilitated the administrative transfer of the Chief-of-Party duties assisting Dr. Thorne in closing out his records and by briefing Dr. Whittier on the procedures necessary for the administrative and fiscal close out of a nine-year project. Dr. Whittier's close out workplan was approved by Mr. Doane and by Dr. Darrell Fienup, Campus Coordinator of the Nepal Project. These procedures were followed in terminating project activities (see Part II of this report).

When the final MUCIA team arrived at post in late 1982, one of its first activities was to formulate a Specific Workplan to implement the General Workplan developed by Drs. Sofranko and Wilson (1982) and fit it to the final project ammendment developed by USAID, MUCIA, AND IAAS, which reflected changes in the objectives for IAAS.

The body of this report is divided into two parts. Part I is keyed directly to the Specific Workplan; the item designations in Part I refer to the item designations in the workplan (i.e., item II.B. in this report refers to item II.B. in the Specific Workplan). Direct quotes from the Workplan are indicated by underlining. Each item describes the activities that took place or were completed in that area during Dr. Whittier's tenure as Chief-of-Party in the final four months of the project. One item not specified in the Specific Workplan -- an update on overseas participant training -- is included under item II.E.

Part II of this report details the closing out of the project.

**PART I**

## I. TECHNICAL ASSISTANCE

### A. Plant Science Advisor

This position was vacant during the last four months of the project as Dr. Thorne requested early termination of his assignment and departed from Nepal on June 11, 1984.

### B. Animal Science Advisor

Dr. Weslie Combs completed his assignment with the project on September 30, 1984. During the last months of the project, Dr. Combs was active in organizing research on small ruminants, in helping to establish herds of local goats and sheep (Kage) on the North Farm, and in facilitating other research projects. See his end-of-tour report for details. In addition to his other duties, Dr. Combs provided much-welcomed daily advice and counsel to the new Chief-of-Party.

### C. Rural Development Advisor

During the reporting period, the Rural Development Advisor, Dr. Herbert Whittier, also served as Chief-of-Party. Faced with the many tasks necessary to the close out of the project, less time was devoted to the tasks of RD advisor than previously. The RD group had, however, established its own momentum by this time, and most workplan activities in this area were completed. It is noteworthy that, during the reporting period, the Pilot Extension Project became increasingly active, the Agricultural Communications Services Center became a functioning unit, and the IAAS staff seminar series was an on-going activity. Details are in Dr. Whittier's end-of-tour report (1984).

### D. Short Term Technical Assistance

By the final four months of the project, most of the activities called for under the short term technical assistance section of the specific workplan had been completed.

#### D.1. Statistics and Research Design (3 mo.)

Completed prior to June 1, 1984.

Status: 1+ person/mo. completed. Dr. Charles Cress; July-September 1983.

#### D.2. Communications and Audio-visual Specialist (1 mo.)

Status: An advisor was not recruited specifically for this position as most of the tasks were able to be performed by the RD Advisor, by Mr. David Krauss (see item D.3. below), and by Mr. Helmich van Rees, an agriculture student from the Netherlands assigned to IAAS for six months.

### D.3.Laboratory Equipment Specialist (2.5 mo.)

Status: 2 consulting periods of 1 month each were completed by Mr. David Krauss:

July-August 1983 Report submitted  
 July-September 1984 Report submitted

Mr. Krauss's second trip to IAAS (July 30-September 1, 1984) took place during this reporting period. During his first visit to Rampur in the previous year, he had done a great deal of repair work on IAAS equipment and had instructed staff members in its maintenance. He had also worked with the RD Advisor and members of the RD group in the design of and preparation of equipment orders for the Agricultural Communications Services Center, updated the MUCIA/IAAS equipment inventory, and designed a computerized system for maintaining inventory control. During this second visit, Mr. Krauss worked specifically with the Agricultural Communications Services Center to set up the newly arrived equipment, establish the darkroom facility, and prepare data sheets on the use of the equipment. On the request of Mr. Kunwar, Mr. Krauss also prepared rough drawings for a new media center building should funding for such a project be available in the future.

Mr. Krauss also worked with the various equipment/laboratory centers on campus to be sure equipment was functioning before the project terminated. As a soil scientist, he was able to offer advice on the evaluation and final review of a soil sciences lab manual being prepared by Mr. P. P. Sharma and Mr. Bhairab Khakural.

A final, and invaluable, assistance provided by Mr. Krauss was helping to update the MUCIA/IAAS inventories during this critical period in which all MUCIA-purchased or held properties were being passed over to the Institute.

### D.4.Specialist in the Training of Trainers (2 mo.)

Completed prior to June 1, 1984

Status: Dr. Carroll Wamhoff and Dr. Colleen Cooper each completed a two-week consultancy (March-April 1984) for a total of 1 person/month. Report submitted. Additional details are found in the RD Advisor's end-of-tour report.

### D.5.Library Science Specialist (.5 mo.)

Completed prior to June 1, 1984.

Status: 2-week consultancy completed by Mr. John Beecher in October 1983. Report submitted.

### D.6.Experiment Station Management Specialist (5 mo.)

No activity during this reporting period.

#### D.7. Extension Communications Specialist (1 mo.)

No activity during this reporting period.

There were four additional specialists who provided service to IAAS during the reporting period. These are mentioned here although they are not included in the specific workplan.

1 and 2. Dr. Andrew Soefranko and Dr. Russell Odell, both of the University of Illinois, were at IAAS for five weeks in May and June of 1984. They worked on developing an academic and administrative plan for IAAS (part of workplan item VI.H.). Their report is very insightful; it is unfortunate that USAID had to complete its Project Paper for the IAAS II project before the report was completed. Copies of the Soefranko-Odell report have been distributed throughout IAAS and to USAID.

3. Dr. Rogelio Cuyno of the University of the Philippines at Los Banos (UPLB) organized and directed a training program for seven IAAS administrative staff members that was held at UPLB. He later visited IAAS for two and a half weeks (July 31-August 16, 1984) to provide follow-up and additional training for the IAAS staff in his course. Additional details on this training are under item II.A.2. and in the report submitted by Dr. Cuyno.

4. Dr. Dharmo Butani, a noted entomologist with the Indian Agricultural Research Institute, spent two months (July 18-September 16, 1984) at IAAS where he worked with the Department of Plant Protection in developing new courses and refining course syllabi as well as assisting with the preparation of an entomology lab manual (printed by MUCIA). Dr. Butani presented a seminar on problems of entomology and plant protection for the IAAS faculty. On a nightly basis, at the guesthouse where he was staying, he sponsored discussion groups on topics ranging from entomology to institutional development. With Dr. Farendra Neupane, Chairman of Plant Protection, Dr Butani co-authored and helped translate into English a textbook on entomology. His visit was particularly stimulating for the faculty because of the scholarly attitude he consistently displayed and his ability to work with all the staff.

## II. TRAINING

### II.A. Short term training

#### 1. Courses in Nepal

1.1 Design and analysis of agricultural experiments.  
Status: completed prior to June 1, 1984; report on file.

1.2 Training of trainers. Status: completed prior to June 1, 1984;  
report on file.

1.3 Audio-visual training. Status: completed; July 30-September 1, 1984; report on file. (see also RD Advisors end-of-tour report) No short term advisor was brought in specifically for this task. However, Mr. David Krauss, Laboratory Equipment Specialist, who came to Rampur from July 30-September 1, 1984, was prepared to provide training in the use and maintenance of audio-visual equipment as part of his assignment. It was hoped that a formal course could be offered that would include staff from each department, but scheduling and time constraints made this impossible. Three staff members associated with the Agricultural Communications Services Center did receive training in the use and maintenance of equipment. They were: Narayan Kunwar (Asst. Dean for Academic Affairs); Muari Suvedi (Member Secretary, Extension Comm.); and Om Bhadur (Graphics Technician). By the end of the project, the Agricultural Communications Services Center was a functioning unit. Film had been developed and prints and enlargements made; the videotape recorder was operational and the staff mentioned above were practicing the use of it.

## 2. Training for IAAS administrative staff.

Status: completed; June-August 1984. Report on file.

Seven administrative staff members were selected to receive training both in the Philippines and on the Rampur campus. Training opportunities were also made available to other administrative staff on the Rampur campus. From June 11 through June 30, 1984, the seven selected staff members were at the University of the Philippines at Los Banos for a specially designed course entitled Management of Administrative Aspects of Higher Education in Agriculture. These seven staff members were:

- |                          |                                    |
|--------------------------|------------------------------------|
| 1. Raj Khatri Chhetri    | IAAS Deputy Administrator          |
| 2. Pushpa Bimal Bhandari | IAAS Asst. Administrator           |
| 3. Devendra Devkota      | IAAS Account Officer               |
| 4. Dinesh Raj Bista      | IAAS Asst. Administrator           |
| 5. Bishnu Hari Devkota   | IAAS Asst. Librarian               |
| 6. Khada Nanda Sharma    | IAAS Asst. Administrative Officer  |
| 7. Ganga Lal Shrestha    | IAAS Deputy Administrative Officer |

In addition to participating in seminars and observations at UPLB, each participant used his training to prepare a brief workplan on a specific problem area to make administration at IAAS more efficient. The proposed activity was to be within the participant's area of responsibility, feasible, not an activity requiring approval from beyond the campus, and able to be implemented in a short time with limited financial support.

The participants left UPLC on June 30, 1984, and returned to campus to try to implement their workplans. From July 31 through August 16, Dr. Cuyno, director of the course, visited Rampur to work further with the participants on the implementation of their workplans, advise

on problems encountered, and help revise the plans. On August 12, 1984, Dr. Cunyo joined the participants in a closing ceremony for the course at which each participant presented his refined workplan and reported on its implementation. In addition to this training, the Course Director offered a 5-day, 2 hour-per-day seminar entitled Systematic Managerial Analysis and Decision-Making (August 6-10, 1984). This seminar was open to all IAAS staff members; 18 IAAS staff and the MUCIA Livestock Advisor completed the course. Many other IAAS staff expressed a desire to participate in the seminar, but this was a very busy time for those staff members involved in administration. Further details about the course are available in Dr. Cunyo's report. The IAAS and MUCIA staff who completed the course included:

1. Uma Gupta	Agronomy
2. Ram Chandra Kotrala	Farm Manager (Horticulture)
3. Dainik Bahadur Nepali	Farm Manager (Animal Science)
4. Ganesh Shivakoti	Agricultural Economics
5. Moti Lal Prasad	Farm Manager (Agronomy)
6. Maheshwar Sapkota	Animal Science
7. Badriu B. S. Dongol	Rural Sociology & Extension
8. Kailash N. Pyakuryal	Asst. Dean (Admin.) & Rural Soc.
9. Santa B. Gurung	Ag. Botany
10. Weslie Combs	MUCIA
11. Gopi Upreti	Ag. Statistics and Horticulture
12. Narendar Kemar Chandhary	Hostel Warden
13. Muari Suvedi	Extension Coordinator
14. Chandra Kishor Mandal	Plant Protection
15. Narayan Kunwar	Assistant Dean (Academic)
16. Narsingh Prasad Gupta	Rural Sociology & Extension
17. Durga D. Dhakal	Horticulture
18. Satya Tiwari	Campus Chief (Lamjung)
19. Padam P. Sharma	Soil Science

### 3. Overseas training for IAAS academic faculty.

All MUCIA-funded non-degree overseas training for academic staff had been completed prior to June 1, 1984. No academic faculty were sent overseas by the MUCIA project during its final four months. One faculty member did depart for overseas short term training under other funding during the reporting period. Mr. Rishi Adhikary (Chairman of Horticulture) received AURDC funding for 6 months training (July 15, 1984-January 15, 1985) at the Asia Vegetable Research and Development Center at Kasetsart University in Bangkok, Thailand. The training is on the topic of "Heat and Flood Tolerance Physiology of Tomatoes."

### II.B. Study tours for academic staff.

Three study tours were planned in the specific workplan: one to the Mediterranean; one to Southeast Asia; and one to India. The first two tours were completed prior to June 1, 1984. Reports on these tours and activities by the MUCIA advisors and the 10 participants (5 on each tour) appear in Dr. Comb's and Dr. Whittier's end-of-tour reports.

The India Study Tour took place from June 17 through June 30, 1984. Ten people, including the IAAS Dean, the RD Advisor, and eight teaching faculty, participated in the tour. The tour participants were:

- |                                 |                                  |
|---------------------------------|----------------------------------|
| 1. Mr. Bindeshwori Prasad Sinha | Dean, IAAS                       |
| 2. Dr. Herbert L. Whittier      | MUCIA Chief of Party; RD Advisor |
| 3. Dr. Tej Bahadur K. C.        | Professor, Soil Science          |
| 4. Dr. Fanindra Neupane         | Professor, Entomology            |
| 5. Mr. Satya Narayan Tiwari     | Lecturer, Extension              |
| 6. Mr. Teg Bahadur Nepali       | Lecturer, Botany                 |
| 7. Mr. Rishi Adhikary           | Lecturer, Horticulture           |
| 8. Mr. Uma Shankar Gupta        | Lecturer, Agronomy               |
| 9. Mr. Ishwari Prasad Dhakal    | Lecturer, Animal Science         |
| 10. Mr. Mukbal Hussain Khan     | Asst. Lecturer, Botany           |

The tour began with a briefing and orientation provided by USAID/India's Agriculture and Production Unit (Delhi). The institutions visited included: the Indian Council for Agricultural Research (Institute (IARI-delhi); the Institute for Cropping Research in the Semi-Arid Tropics (ICRISAT-Hyderabad); the Andhra Pradesh Agricultural University (APAU-Ragendranagar); the Rajasthan College of Agriculture (RCA-Udaipur); and the G. B. Pant University of Agriculture and Technology (GBPUNT-Pantnagar). At the completion of the tour, the participants presented a seminar for their IAAS colleagues and submitted reports on the tour. These reports were printed and bound together in an end-of-tour report which was distributed among the IAAS faculty and submitted to USAID/Nepal.

This tour was particularly useful for IAAS faculty as IAAS is trying to develop its curriculum in such a way that its B.Sc. graduates will be easily accepted into Indian universities for graduate work. This was a repeated topic of discussion among the tour participants and our hosts during the trip. Details on this point are found in the end-of-tour report mentioned above.

#### II.C. Administrative Visit to MUCIA Universities

Dean Sinha visited three MUCIA Universities during August and September of 1984. His tour began in Washington where he conferred with USAID and World Bank officials about the proposed IAAS II project.

At Ohio State University in Columbus, Dean Sinha conferred with key administrators including the University President. At one reception, he met the Provost and other administrators. A second reception was attended by the Nepali students at Ohio State as well as those from other schools in Ohio. He also visited the Ohio Agricultural Experiment Station at Wooster and research and extension facilities on the university campus.

From Ohio, Dean Sinha traveled to Michigan State University in East Lansing where he again met with administrators, including Dean Smuckler of International Studies and Programs and Dr. Darrell Fienup - IAAS/MUCIA Campus Coordinator, and with several of the previous advisors to the project. He also met with the two IAAS staff members on campus, Mr. Nanda Joshi (Animal

Science) and Mr. Ganesh Adhikary (Agricultural Economics). In addition, Dean Sinha had the opportunity to visit research and extension facilities connected with the university.

At the University of Wisconsin, Madison, Dean Sinha again met with the President and other administrators. He also met with IAAS staff member Mr. Bishnu Bhandari, who is completing his PhD in Rural Sociology there.

Upon return to Nepal, Dean Sinha met with the MUCIA Chief-of-Party and discussed his tour in detail. Although this was not his first visit to the U.S., it was the first opportunity Dean Sinha had had to visit U.S. universities and meet with high-level administrators. The Dean's background has been in government service, and he found this trip, as well as those to universities in Indonesia and India, very productive for his responsibilities in administering academic programs at IAAS.

#### II.D.USAID-Financed Training Programs in India

No new IAAS graduates or staff began participation in USAID-financed degree programs in India during this reporting period. USAID continued processing three IAAS staff members for this program during the period, but as of the termination of the project, arrangements had not been completed. Several IAAS staff members are still in India pursuing advanced degree training under USAID funding.

#### II.E.PARTICIPANT TRAINING

Manpower and staff development involving overseas degree training was not a specific workplan item since all participant training selection had been completed prior to the arrival of the final team at IAAS. An update is included here because, as of the termination of the project, several IAAS staff members were still completing their training and several others had recently returned from their degree programs.

#### E1. MUCIA Participants Who Returned Between January & September 1984

Name -----	Field -----	Degree/Univ. -----	Assignment -----
1. Tika Bahadur Adhikari	Plant Path.	M.S./UPLB	Rampur
2. Jagdish Timsina	Agronomy	M.S./UPLB	Rampur
3. Ganesh Dahal	Plant Path.	M.S./UPLB	Rampur
4. Mohan Kharel	Animal Sci.	M.S./UPLB	Rampur
5. Durga Mani Gautam	Horticult.	M.S./UPLB	Paklihawa
6. Shyam Kishor Sah	Vet. Sci.	M.S./UPLB	Paklihawa

## E2. Returned from Non-degree Training - Other Funding

Name	Field	Training Loc.	Assignment
1. Sundar Man Shrestha	Plant Path.	Netherlands	Rampur
2. Resham B. Thapa	Entomology	China	Rampur

## E3. IAAS Staff Still in Training Overseas

Name	Field	Degree/Univ.
1. Bishnu Bhandari	Rural Soc.	PhD/Wisconsin
2. Nanda Joshi	Animal Sci.	PhD/MSU
3. Gyan Shrestha	Horticult.	PhD/Oregon
4. B. B. Basnyat	Ag. Eng.	MS/AIT-Thailand
5. Ganesh Adhikari	Ag. Econ.	PhD/MSU

## E.4. IAAS Staff in Overseas PhD Programs under other funding

Name	Field	University
1. B. P. Sharma	Agronomy	South Dakota State U.
2. T. P. Nepal	Agronomy	Iowa State
3. Pradeep Tulachan	Ag. Economics	Cornell
4. Laxmi Suvedi	Agronomy	UPLB
5. Nagendra Shah	Dairy Science	Univ. of Alberta
6. K. T. Augusty	Fisheries	McGill Univ.
7. K. P. Sharma	Animal Sci.	University of Maryland
8. C. M. Shrestha	Ag. Economics	University of Kentucky
9. Ram Sharma	Agronomy	Oklahoma State University

## III. RESEARCH

All three MUCIA advisors worked with IAAS faculty and administration to help promote research activities. Under items III A, B, and C in the work-plan, each advisor was designated to work with some specific research interests. Details on these specific projects will be found in each advisor's end-of-tour report.

As noted in Dr. Thorne's end-of-tour report, 30 research projects were approved for support through MUCIA project funds. Twenty-three of these projects were underway prior to the arrival of the final team; seven projects were approved in May of 1984. Project number 30 was subsequently cancelled as the researcher obtained funding to study for his PhD in the U.S. Project number 12 was terminated by mutual agreement of the Research Committee and the researcher. Project number 1, fish pond development, had its construction phase completed but no funded research was conducted. One additional project,

number 13, was discontinued before any funds were expended. Of the remaining projects, 15 submitted final "draft" reports through the Research Committee secretary to the MUCIA Chief-of-Party during the final week of in-country operation. A volume of these reports has been reproduced by MUCIA and distributed to USAID/Nepal. Twelve projects provided progress reports and were still in process in September, 1984. A complete list of MUCIA-funded research can be found in Soefranko and Odell's end-of-tour report (May/June 1984).

During the two-year involvement of the final team, all advisors were members of the Research Committee. In the final four months of the project, the Research Committee consisted of:

Mr. B. P. Sinha	Dean, IAAS
Dr. H. L. Whittier	Chief-of-Party, MUCIA/IAAS Project
Dr. W. Combs	Advisor, Animal Science
Dr. K. N. Pyakuryal	Prof. of Rural Soc. & Asst. Dean
Dr. F. N. Neupane	Chairman, Dept. of Plant Protection
Dr. Tej Bahadur K. C.	Prof. of Soil Science
Mr. N. Kunwar	Asst. Dean
Mr. K. R. Tiwary	Lecturer, Animal Science
Mr. P. P. Sharma	Chairman, Dept. of Soil Science
Mr. V. P. Gupta	Chairman, Dept. of Agronomy
Mr. V. P. Sharma	Chief Officer, NMDP, Rampur
Mr. D. D. Dhakal	Chairman, Dept. of Horticulture

Dean Sinha served as Chairman of the committee and Mr. Dhakal was Member Secretary. At each meeting, the amount of time devoted to considering policy and operational guidelines was approximately the same as that spent reviewing on-going and proposed research. This was a desirable situation, and it was gratifying to note that, as time went on, the discussions rested more and more exclusively in the hands of the IAAS representatives. The advisors were consulted less often as the Institute personnel began to devise their own solutions to problems. This is an extremely important step in the process of institutionalization.

The recent policy decisions of the Research Committee include:

- a decision to establish a monitoring group to do periodic inspections of research sites and projects
- requiring that funded researchers sign an attendance roll during vacation periods during which they were receiving funding
- a decision to allow new researchers to have only one project at a time funded
- a requirement to demand more rigid adherence to progress and final report deadlines for researchers

#### IV. TEACHING PROGRAMS

All three MUCIA advisors worked to improve teaching and curriculum. Five major items were included under this workplan heading.

##### 1. Preparation of syllabi and/or textbooks for assistance to teachers and guidance for external examiners.

All departmental groups developed new syllabi and course outlines for their regular courses as well as for new elective courses (see point 3 below). These syllabi include the primary and secondary course objectives, provide topical breakdowns of the major points covered in the course, and usually include a list of required and recommended readings. These syllabi were reproduced for distribution to students and to external examiners.

No new textbooks were produced by members of the Institute during the reporting period, but activities were underway for the development of at least three books. Dr. Farendra Neupane, Chairperson of the Plant Protection Department, worked with Dr. Dharmo K. Butani, the visiting entomology scholar from IARC, New Dehli, to complete and translate into English a new entomology text. This jointly authored publication should be in press by the end of 1984 or early 1985. Mr. Ganesh Shivakoti, Chairperson of the Agricultural Economics Department, began teaching a course on agricultural development strategies and is collecting relevant papers to put together a set of readings for students in that course. Mr. Murari Suvedi and Mr. Narayan Kunwar, both of the Department of Rural Sociology and Agricultural Extension, have assembled a number of papers on population problems that they used in a training session with 1<sup>st</sup> year I.Sc.Ag. students. They are now developing a reader using this material that will be used in a course on population problems that is in the planning stages. Mr. Suvedi and Mr. Kunwar are also preparing a field research manual for students in extension education; this will be used to aid students in their practicals.

During the reporting period, two laboratory manuals were developed and printed at project expense. The first of these, A Laboratory Manual of Soil Science, was produced by Mr. Padam P. Sharma (Chairperson of the Department of Soil Science and Agricultural Chemistry) and Mr. Bhairal R. Khakural (Lecturer in Soil Science). The second, A Laboratory Manual of Introductory Agricultural Entomology, was co-authored by Dr. Farendra Neupane, Mr. Resham Thapa (Lecturer in Entomology), and Dr. Dharmo K. Butani. Both manuals are considered excellent and should provide examples for faculty in other departments to follow.

##### 2. Development of course outlines to define course objectives and to report accurately what is being taught.

This goal was met as part of the development of the course syllabi discussed in item 1 above. Drafts of all course outlines were developed as part of the new five-year curriculum and accepted by the IAAS Faculty Board in February 1984. Abbreviated versions of the course outlines in the form of

course descriptions were assembled and printed, with MUCIA funding, in September of 1984 as the IAAS Bulletin for 1984 (2041).

3. Development of elective courses to permit some specialization and pursuit of special interests and talents.

All departments responded well to this concept. The Agricultural Economics Department introduced two new elective courses, and the Agricultural Extension and Rural Sociology Department introduced six new courses. The Agronomy Department developed four elective courses, Animal Science eight elective courses, Horticulture seven elective courses, Plant Protection five elective courses, and Soil Sciences three elective courses.

These courses are only available to final year students in the B.Sc.Ag. program. Once a student elects a disciplinary area, he must take all the electives in that area and will then receive a specialization in that area. A student cannot take electives from several departments; once the elective area is chosen, the elective courses become compulsory. Thus, the term "elective course" is slightly misleading; it is the area of specialization that is elective rather than the courses themselves. It is not clear just how many elective courses a student must take in a department to complete a specialization. In a department offering a small number of electives such as Agricultural Economics there is no problem, but in Horticulture, for example, with seven courses, it would be an impossible task to complete the elective courses in addition to the other required courses in the final year.

4. Arranging of seminars concerned with teaching improvement, evaluation of teaching, and related subjects.

With the exception of the formal course "Effective Teaching Methods," offered in March and April of 1984 by two short-term consultants and the RD Advisor, there were no formal institute-wide seminars in this area. Each advisor, however, worked on a one-to-one basis with faculty in his area on these issues. The preparation of the draft Staff Evaluation Program generated a great deal of discussion in these areas by the committee of which the RD Advisor was a member. Likewise, these issues were brought to the fore when the draft document was distributed to the faculty for feedback.

5. Encouragement and assistance in developing at least ten textbooks for use in IAAS courses.

As noted above in item #1, no textbooks have yet been published by members of the Institute although three are in preparation. Financial incentives do not seem to be a prime variable. In fact, one of the authors of the laboratory manuals mentioned above initially did not want to accept the incentive payment offered. The desire to provide the best and most useful materials for their students seems to be more significant to faculty members who are working on texts and manuals.

## V. EXTENSION ACTIVITIES

During the final four months of the project, IAAS workplans for extension and the Pilot Extension Project (PEP) continued to be refined and implemented. In June of 1984 the Dean reaffirmed his position as coordinator of the extension committee, appointed a new member secretary to be responsible for day-to-day planning and implementation, and appointed a new Extension Committee, consisting of the chairpersons of each department. A new workplan was developed with greater detail and scope than previous workplans. A copy of the workplan along with other workplans developed over the past two years is appended to the Rural Development Advisor's end-of-tour report.

One of the first new programs implemented under the new staffing was the development of a farmers' advisory board whereby a group of leader farmers and the Pradhan Pancha (Panchayat Leader) from the PEP area began monthly meetings with members of the Extension Committee. This group discussed local problems and possible solutions and worked on strategies for improving the effectiveness of the extension services that IAAS could provide. Also during the final four months, the collection of data for a baseline survey of the PEP was completed. When this data is tabulated and analysed, it will allow a better understanding of the area being served as well as provide a baseline from which to examine the effect of various extension programs in the PEP. The institutionalization of the PEP is by no means complete but, given the current plans and the level of commitment amongst IAAS personnel, there is no question that it will develop. There will no doubt be changes in directions and goals of extension efforts at IAAS, but there is also no doubt that extension programs are now a firmly fixed component of the Institute.

## VI. SPECIAL ACTIVITIES

### A. SEMINARS.

MUCIA Advisors in general and the Rural Development Advisor in particular were to assist in the development and support of a regularly scheduled faculty seminar series at IAAS. While the initial months of the final two years saw little activity in the presentation of seminars and lectures there was a steady increase in the number of presentations. A lot of this is due to the appointment of a very dynamic seminar coordinator, Mr. Murari Suvedi. The increase is also due though to a shift in attitude by staff members. Towards the end of the project, one of the greatest difficulties was finding available time in which to schedule seminars. The sharing of information through seminars has reached such a level that we can say that institutionalization has occurred in this area. (See the Rd Advisor's end-of-tour report for more detail.)

### B. SURVEY OF IAAS GRADUATES.

The RD Advisor was assigned to assist IAAS in conducting a survey of its graduates to help evaluate the IAAS program. The Institute decided not to put the survey up for bids to an external agency as originally envisioned. Instead, at the Institute's request, Mr. Bhola Pokharel revitalized his IAAS/

MUCIA research project (#5) dealing with the evaluation of B.Sc. graduates from IAAS. Questionnaires were sent to over 200 graduates and 47 responded with complete information. Both graduates and their employers (who were also polled) felt generally satisfied with the level of training IAAS B.Sc.'s had received. Some employers felt that the graduates should have received more practical experience, but this may be an unrealistic expectation. The students do have a fairly wide range of course related practicals but employers seem to be asking for a depth of experience in their particular areas that cannot be given to general B.Sc.Ag. students. It would be impossible to provide practical experience which would suit all potential employment possibilities.

The graduates' responses to the questionnaires provided many suggestions for the improvement of the curriculum, programs and facilities at IAAS. These responses were tabulated and presented in Mr. Pokharel's report.

To add to the information received through the Pokharel study, the RD Advisor had opportunity to meet many IAAS graduates and their employers during the duration of his assignment. Most of the employers contacted by the RD Advisor felt that the training received at IAAS was good and that, with a short period of apprenticeship in the position, IAAS graduates were able to operate quite well.

#### C. IAAS ALUMNI HOMECOMING.

The IAAS Alumni Homecoming specified in the workplan has not been held. The delay was related to waiting for the Evaluation (item B. above) to be completed and a more complete compilation of the current addresses of the graduates. In discussions with the Dean, it was decided that the alumni invited to the homecoming would probably be restricted to a sample of the group, cross-cutting graduating classes, occupation and other variables. The reduced number would allow for longer and more intense interaction of the faculty and the alumni at the homecoming and, thus, provide a more controlled situation to obtain feedback and meaningful ideas for improving instruction and the quality of IAAS graduates in the future.

#### D. FENCING AND FORAGE DEVELOPMENT OF THE NORTH FARM.

MUCIA agreed to help plan and fund fencing and to aid in the development of forage on the North Farm.

An IAAS/MUCIA funded research project on *Leucaena leucocephala*, with the assistance in planning from Dr. Weslie Combs, MUCIA Animal Science Advisor and implementation by Mr. K. R. Tiwari, Principle Investigator, involved the planting of over 15,000 seedlings on the slopes on the North Farm. An additional research project funded by IDRC involved additional experimental forage plantings on the North Farm. Finally a small leucaena seedling plot was established on the North Farm by the extension group to grow and provide seedlings of forage trees for farmers in the PEP. Much more planting of forage trees is needed, but a start has been made.

Under the budgetary category of farm improvement, a contract was signed between a local contractor and the IAAS/MUCIA project to construct a perimeter fence of about 4.2 miles. The fence was to have reinforced concrete posts and multiple strands of barbed wire. The original planning for the fence involved the MUCIA Animal Science Advisor, the Dean, and members of the Animal Science Department. The work was to be completed in six months (by August of 1984) and the contractor paid in installments for work completed, inspected, and approved. The contractor first removed the existing fence (wooden posts and barbed wire), which was in a state of disrepair, and then began to pour fence posts. After some of the work had been completed and inspection of work was made by the MUCIA Animal Science Advisor, the Dean and members of the Animal Science Department. The work was found to be inadequate and the Animal Science Advisor submitted a report detailing the substandard nature of the work. The contractor was confronted with this information. He asked for an extension of contract and offered to redo the defective work. Unfortunately and extension could not be granted because the IAAS/MUCIA project contract period was nearing its end, and the fencing contract had to be terminated.

The Institute is now faced with the problem of having no fence all since the existing one had been removed by the contractor. The USAID Project Officer, at the close of the project, was trying to help the Institute locate other sources of funding to complete the fencing efforts on the North Farm.

#### E. FARM LAND SHAPING AND IRRIGATION DEVELOPMENT.

Activities that occurred in this area were completed prior to this reporting period. Additional information is in the December 1983, Progress Report and in former team leader Dr. Marlowe Thorne's end-of-tour report (1984).

#### F. INSTALLATION OF A BIOGAS UNIT.

Work was completed prior to this reporting period. Details are in the Animal Science Advisor's end-of-tour report (1984).

#### G. PROVISION OF A MEDICAL DOCTOR.

During the reporting period, a doctor from the Bharatpur Teaching Hospital made scheduled visits to the IAAS Medical Clinic to treat faculty, staff, and students.

#### H. COMPLETION OF CAMPUS MASTER PLAN FOR MEDIUM TERM (10-20 YEARS).

A master plan for the campus was to be developed during the final two years of the project. Several steps were made in this direction. Mr. James Miller, campus planning specialist, visited the campus as a MUCIA short-term consultant in October of 1983. Mr. Miller had made several previous visits to the campus and was impressed with its development despite the fact that it had been, in his opinion, developing without a master plan.

He stressed the need for master planning effort that would first include a plan accounting for future teaching, research and extension, curriculum, student loads and administration. The visit and report of two MUCIA Academic Planners, Dr. Andrew Soefranko and Dr. Russell Odell, in May-June 1984 helped with this effort. The Soefranko-Odell report covers manpower needs, student projections, institute staff and needs, academic programs, research, extension and outreach programs, facilities, financial support and recommendations. Copies of the Miller report and the Soefranko-Odell report are available through USAID/Nepal.

Planning efforts became somewhat confused during the final year of the project as USAID and IAAS diverted their attention to planning for the IAAS II project. As part of their project planning, USAID/Nepal brought in a team of academic and administrative planners to help prepare an annex for the new project paper. While MUCIA advisors were not restricted from discussions with the USAID consultants, they were not allowed to examine drafts of the project paper, which specified future plans, as this might jeopardize MUCIA's position as bidder for the IAAS II contract. As part of the preconditions for the World Bank portion of the proposed IAAS II project, a campus survey and plan was called for. Again, MUCIA was not allowed to participate (because the Bank project was tied with the USAID project). The exception to this policy of non-participation was a request from the USAID/Nepal Project Officer and the IAAS Dean for MUCIA to provide funding for the architectural firm selected by IAAS and USAID to conduct the survey. The IAAS staff, looking to the future, aware of a level of confidentiality on planning for IAAS II, and in general beset with a plethora of planners asking many of the same questions, became less interested in working with MUCIA advisors on planning activities. Most of the staff members at this time shared the feeling that USAID seemed to be unsympathetic to the Institute's perceived needs in future manpower and staff training programs.

What emerges from the various studies done is a need to coordinate the existing reports and data, take greater account of the IAAS faculty's own perceptions of the Institute's needs, and continue in IAAS II to fund a complete master plan. Once a master plan is developed, (and there seems to be some confusion among the various agencies and groups involved as to just what a master plan is) within the framework of potential policy and program changes, the plan should be adhered to. The Institute has taken its own steps towards the future with the Dean's appointment of a planning committee, who would probably welcome a detailed master plan to aid in their efforts to promote the growth and development of the Institute, its branch campuses and their programs.

#### I. ESTABLISHMENT OF LIVESTOCK BREEDING HERDS.

Specific activities during the final four months of the project included the purchase of a nucleus herd of local goats and a nucleus flock of local Kage sheep. Details pertinent to this section are in the Animal Science Advisor's end-of-tour report.

## J. WATER FOR THE LAMJUNG CAMPUS.

MUCIA did not provide funding for a water supply for the Lamjung Campus. Since funding for this item has been included in the IAAS II proposal, the Dean and the MUCIA Chief-of-Party felt that the limited funds remaining in the current project budget could best be used elsewhere.

## VII. ACQUISITION OF EQUIPMENT AND MATERIALS

MUCIA Advisors worked throughout the life of the project with their respective faculty counterparts to select and order appropriate equipment and materials to enhance the teaching, extension and research functions of their counterpart faculties and the Institute as a whole.

By the final four months of the project, most equipment and materials suggested in Section VII A - I of the the specific workplan had been ordered and received by IAAS. Mr. David Krauss, Laboratory Equipment Specialist, was at Rampur from July 27 through August 1, 1984, and updated a previous inventory of equipment purchased. This inventory is included in Mr. Krauss's end-of-tour report.

Major items of equipment received during the reporting period include: two Toyota diesel-powered vehicles; a large seed germinator; a 1400 kg. live-stock scale; a 300 kg. sheep scale; and a heavy duty squeeze chute for handling large animals. In addition, two air freight shipments (NA 54 and NA 55) were received; these contained additional equipment and supplies for the Agricultural Communications Services Center, the Soil Science Department, the Agronomy Department, and the Plant Protection Department.

One shipment was still in process at the conclusion of the project. Two wheeled tool carriers had been ordered from Hyderabad, India, and were still in transit to Nepal by surface carrier. MUCIA made arrangements with the shippers and obtained the customs clearance forms. USAID/Nepal agreed to help facilitate the clearance and pass over the equipment to IAAS.

### Incompleted Activities:

Several last-minute local equipment purchases requested by the Institute were not able to be made because of lack of time. The following items were requested and approved by USAID/Nepal:

1. A 15 hp. electric water pump for the livestock farm to connect the newly constructed tube well (MUCIA/USAID/LAAS) with the several-year-old but as yet unused water tower (USAID/LAAS). In addition to the pump, the set-up will require pipe to connect the well to the pump and the pump to the water tower. A small pump house will also have to be constructed.
2. The Animal Science Department has requested a 5 hp. electric motor to run their small feed mill, an oxygen cylinder for their laboratory, 2 voltage stabilizers, and 2 exhaust fans for their laboratory. The Animal Science Advisor also feels that there is a strong need for a fume hood for the laboratory.

Additional Non-locally Available Equipment Needed:

1. Audio-visual:

2 extra batteries for the VCR along with an AC adapter which fits into the VCR's battery compartment and can also be used as a battery charger.

2. Computer:

2 additional Apple II+ computers, 1 to be used in the accounting offices and 1 to be used in the student records offices. These require battery backup systems, stabilizers, and power inverters (all available from Belltronics in Kathmandu).

In addition to these items, each department has prepared its own list of equipment needs, as requested by USAID, for the IAAS II project.

VIII. IAAS COMMITMENTS

MUCIA Advisors worked to help IAAS activity commitments.

A. COMPLETE CAMPUS DEVELOPMENT MASTER PLAN

This activity was not completed, but some progress was made in defining what was necessary for the development of master planning. This has been reported on more fully in section VI.H. above.

B. COMPLETE CURRICULA REVISION

Curricula revision is a continuous activity at IAAS, this has been reported in section IV.1. and IV.2. above. A revised and updated IAAS Bulletin for 1984, which includes the new 5 year B.Sc.Ag. curriculum, was submitted and printed in September of 1984. Printing expenses were provided by MUCIA.

C. DEVELOP IAAS FACULTY POLICY HANDBOOK

Other than discussion, no progress was made in developing an IAAS Faculty Policy Handbook and the Institute continues to rely on Tribhuvan University's policy handbook which it must follow in any case. An abbreviated version may be forthcoming after the implementation of the Staff Evaluation and Incentive Program referred to in part E. below.

D. DEVELOPMENT AND IMPLEMENTATION OF A FARM PLAN

Little progress has been made in this area. The Animal Science Advisor felt that the Farm Development Plan prepared by Dr. Wallace W. Nelson, MUCIA short-term consultant, in 1977 was still appropriate and put it forward, but as of the close of the project, no action had been taken.

#### E. IMPLEMENT STAFF EVALUATION AND INCENTIVE PROGRAM

A draft document for staff evaluation was prepared by a committee selected by the Dean. This committee included the RD Advisor who was active in producing the first draft. A second, revised draft was reviewed at a full faculty meeting. The Dean and assistants then took on the task of modifying the document to incorporate suggestions received. The evaluation methods were to be tested in June of 1984 but, because of commitments of key members of the evaluation team, including the Dean, the testing had to be put off. As of the close of the project the trial run of the evaluation device had not yet been done. There appears to be widespread interest in this program, however, and the testing will be done soon. The plan is then to develop incentive programs after the successful implementation of the staff evaluation procedures.

**PART II**

## PROJECT PHASE OUT PROGRAM

One of the major responsibilities of the Chief-of-Party during the final four months was to oversee the orderly closedown of the project. In addition to completing the major items in the workplan and running the projects day-to-day administrative affairs, MUCIA purchased or controlled equipment had to be inventoried and transferred to the Institute, MUCIA records and files had to be sorted and dealt with, and employees had to be discharged and efforts made to find them new employment. To help accomplish these tasks, a proposed project phase out plan was developed in early June and submitted to all concerned parties (IAAS, UASID/N, MUCIA and MSU) for approval. Approval was received from all concerned parties in the month of June and the plan was implemented. With few exceptions, the close down occurred according to schedule with no major problems.

### PHASE I. JUNE 1-AUGUST 31, 1984.

On the 31<sup>st</sup> of August, with over 95% of the inventory and transfer of equipment complete, MUCIA closed its Rampur offices and residences and terminated all but eight of its Nepalese employees. The Advisors and four of the MUCIA staff members moved to Kathmandu to complete project obligations.

With the MUCIA complex at Rampur closed, trailer number four joined trailers two and three as temporary women's dormitories, and trailer one was retained as an IAAS guest house. House number three also became an IAAS guest house and house number two became a temporary storehouse for furnishings gathered from the other housing units that might be used by the IAAS II contract team. House number one was reserved for the USAID bridging contractor.

All vehicles, generators, and office and maintenance equipment were transferred to the Institute as of August 31, 1984. The MUCIA Chief-of-Party signed a document that permitted the team to continue using one Suburban, one Blazer, and one motorcycle until the team departed from the country on September 19, 1984.

### Phase II. September 1-September 19, 1984. Kathmandu

In Kathmandu, the Chief-of-Party moved into the Malla house MUCIA office/apartment and arrangements were made to lease an adjacent Malla house apartment for the Animal Science Advisor and his wife. The 19 days in Kathmandu were extremely busy. Records and personal effects were boxed and shipped, final inventories and transfers of MUCIA controlled equipment and materials completed, research projects reviewed, laboratory manuals and IAAS Bulletin printed, and bank accounts balanced and closed.

That the closedown went so well is a tribute to the high level of cooperation between the IAAS administrators and staff and the MUCIA advisors and staff. USAID/N was also very helpful during this period. The MUCIA staff in Kathmandu for the final period included:

- |                       |   |
|-----------------------|---|
| 1. Lok B. Ghale       | Senior Administrative Officer<br>transferred from Rampur office<br>hired by USAID on Sept. 19, 1984 |
| 2. Surendra Shrestha  | Administrative Officer  |
| 3. Surendra Bisht     | Administrative Officer  |
| 4. Durga Zoowa        | Accountant/Bookkeeper<br>transferred from Rampur office   |
| 5. Shankar Ranjitkar  | Chief Mechanic and Driver<br>transferred from Rampur office   |
| 6. Tek Bhadur Gurung  | Driver/Mechanic<br>on vacation leave for entire period  |
| 7. Depak Gurung       | Driver/Mechanic<br>transferred from Rampur office<br>hired by USAID on Sept. 19, 1984               |
| 8. Nanda Lal Maharjan | Officer helper/messenger  |

On September 8-12, 1984, MUCIA Executive Officer, Dr. William Flinn, visited Nepal to inspect the closedown procedures. On September 9<sup>th</sup> and 10<sup>th</sup>, both remaining advisors and Dr. Flinn paid a visit to Rampur for final conferences with IAAS administrators. A reception attended by the IAAS staff, Dr. Flinn, Dr. Combs, and Dr. Whittier commemorated the conclusion of the project. On September 10<sup>th</sup>, Dr. Flinn and the advisors returned to Kathmandu for a meeting with World Bank representative Mr. Grant Slade and a reception held by IAAS for its director. On September 11<sup>th</sup>, the MUCIA group met with Dr. Basnyat, Tribhuvan University Registrar, and with Dr. Mohan Man Sainju, Vice President of Nepal's Planning Commission. On the evening of the 11<sup>th</sup>, Dr. Flinn hosted a reception for officials of IAAS, Tribhuvan University, HMG, and USAID to commemorate the conclusion of the IAAS/MUCIA project. On September 12<sup>th</sup> Dr. Flinn, Dr. Whittier, and Dr. Combs had a final meeting with USAID Mission Director, Mr. Dennis Brennan, and Deputy Director, Dr. Janet Ballantyne. Dr. Flinn departed from Nepal early that afternoon.

The remaining few days in Kathmandu were devoted to final shipments of project records, processing and transferring final incoming shipments, and a host of other activities. On September 18, 1984, the vehicles remaining under MUCIA control were left at the USAID mission for IAAS.

#### Phase III. September 19-September 31, 1984

On September 19, 1984, the MUCIA office in Kathmandu was closed, all local employees were discharged, and Dr. Whittier, Dr. Combs, and Ms. Combs departed from Nepal. In October of 1984, both Dr. Whittier and Dr. Combs were at Michigan State University for final debriefing on the project. Final reports were in preparation at this time and were submitted to the project's Campus Coordinator's Office in November.