

# **NEPAL PROGRESS REPORT**

**For the period**

**1 July 1982 to 30 June 1983**

## **DEVELOPMENT OF IAAS**

**Project 367-11-110-102**

**Contract AID/NESA-C-1197**

**AGENCY FOR INTERNATIONAL DEVELOPMENT**

**IN COOPERATION WITH**

**MIDWEST UNIVERSITIES CONSORTIUM FOR INTERNATIONAL ACTIVITIES, INC.\***

- **Members are: University of Illinois, Indiana University, University of Iowa, Michigan State University, University of Minnesota, The Ohio State University and the University of Wisconsin.**

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## MUCIA PERSONNEL

### Transition

An entirely new team of MUCIA advisors came to Rampur during the latter part of 1982. Dr. Henry Poth, Plant Science Advisor, departed in June 1982 and the previous Animal Science Advisor, Dr. Jesse Williams, in mid-1981. Of the previous team, only Dr. Garland P. Wood, Chief of Party, and Jeanne Wood, assistant to the librarian, remained on the project at the beginning of this report period. The Woods transferred to Kathmandu November 18, 1982 to complete end-of-tour reports and left Nepal early in January 1983.

### Animal Science Advisor

Dr. Weslie Combs was the first of the new team to arrive, accompanied by his wife, Patricia. They had been at IAAS for a short-term assignment in January-February 1982 and returned to Nepal on 29 September 1982. Dr. Combs had interim development assignments in North China and Inner Mongolia and in the Philippines and previously in El Salvador, Iran, Jamaica, Barbados, Ghana and Nigeria. Wes and Patricia originate from California and have lived in Canada for more than 20 years. Wes holds his B.S.(Dairy Husbandry) from California State Polytechnic College, M.S.(Dairy Production) from University of Minnesota, and Ph.D.(Animal Husbandry) from University of Wyoming. He has been on the faculty at Cal Poly, Pomona (1952-1959), and at University of Alberta (1962-1971) and has experience in private overseas consulting. For the duration of the project, he holds appointment as Professor of International Studies and Programs, Michigan State University.

### Plant Science Advisor and Chief of Party

Dr. Marlowe D. Thorne arrived in Kathmandu on 8 November accompanied by

his wife, Merale. He officially assumed the team leadership on 18 November.

Dr. Thorne has been Professor of Agronomy at the University of Illinois since 1963 and was Head of the Department from 1963 to 1970. Prior to that he had been Head, Agronomy Department Oklahoma State University (1956-1963); Advisor in Water Technology on the University of Illinois/USAID Contract at G.B. Pant University, Pantnagar, India (1970-1972); Chief of Party at Pantnagar 1971-72; Irrigation Work Project Leader, Eastern Soil and Water Management Section, ARS, USDA, Beltsville, Maryland (1954-56); and Soil Physicist and Head, Agronomy Department, Pineapple Research Institute of Hawaii, Honolulu, (1947-1954).

In April and May 1970, Dr. Thorne was leader of a four man team from University of Illinois which came to Nepal to study agricultural education under a contract with USAID. The team visited a number of potential sites for location of the College of Agriculture, including the Panchayat Training Centre, Rampur, the present site of IAAS.

In 1971 and 1972 while serving at Pantnagar, India, he came to Nepal for short-term assignments. In 1971, it was as a member of a team to evaluate USAID's food grain assistance program in the Terai. In 1972, he joined a MUCIA team in Kathmandu which was making another study of agricultural education in Nepal prior to the formal setting up of IAAS at Rampur.

In 1975, Dr. Thorne was member of a two-man team to Nepal to discuss details of a MUCIA/AID/HMG contract for assistance to IAAS. This involved a short visit to Rampur where IAAS was already in operation with assistance from two AID advisors, before any MUCIA staff began assignment at Rampur. He came on a short term visit to Rampur in July 1982 prior to accepting the long term assignment.

Merle and Marlowe both originated from Utah. Marlowe holds a B.S. from Utah State University (Chemistry), M.S. from Iowa State University (Soil Chemistry) and Ph.D. from Cornell (Soil Physics). In April Merle was evacuated to the U.S. for medical diagnosis & treatment and died there in May. Marlowe returned to Nepal at the end of May and resumed duties.

#### Rural Development Advisor

Dr. Herbert Whittier, Associate Professor jointly with Department of Anthropology and International Studies and Programs, Michigan State University, joined the team in Nepal in December 1982, following a short term assignment during September-October. His wife, Patricia, and sons, Robert and James, arrived in March, 1983. Herb holds a B.A. (Anthropology) from the University of South Florida and an M.Sc (Geography) from Florida State University. Both Herb and Pat hold doctorates in anthropology from Michigan State University. They conducted their doctoral research in Indonesia, 1970-71, with hill farmers in Borneo. In 1973-74, Herb and Pat spent two years in Sarawak, Malaysia, working with the Sarawak Museum on problems of socio-economic change in hill farming communities. In 1979, Herb re-joined Michigan State University as Associate Director in Indonesia of MUCLA/AID/Indonesia Higher Education Projects for two and one-half years. Both Herb and Pat have taught at MSU and Herb has served two years with a private consulting firm as supervisor of its human resources department.

#### Short-Term Advisors

Kim A. Wilson, Work Plan Development  
Michigan State University

June 16-30, 1982

**Andrew D. Sofranko, Work Plan Development**

**University of Illinois**

**June 16-30, 1982**

**Marlowe D. Thorne, Plant Sciences**

**University of Illinois**

**July 6-27, 1982**

**Herbert L. Whittier, Rural Development**

**Michigan State University**

**Sept 27-Oct 16, 1982**

**Visitors to MUCIA/IAAS from Outside Nepal**

**Ralph H. Smuckler, Dean, International Programs**

**Michigan State University**

**July 24-29, 1982**

**April 4-9, 1983**

**William Flynn, Executive Director, MUCIA**

**Ohio State University**

**July 24-29, 1982**

**Thomas Reed, Member, Board of Trustees**

**Michigan State University**

**April 4-9, 1983**

**Darrall Piemp, Campus Coordinator, MUCIA Project**

**Michigan State University**

**February 5-20, 1983**

**Narain Singh, Vice-Chancellor**

**G.B.Pant University of Agriculture and Technology**

**Patanagar, India**

**May 23, 1983**

**Maxine Thompson, Professor of Horticulture**

**Oregon State University**

**April 17-20, 1983**

**Asian Development Bank/Chitwan Irrigation Team**

**February 27-March 1, 1983**

**IBRD/IAAS Teams**

**April 13-15, 1983**

**Dr. Brustillos, Dr. Severino Santos, Peter Bagshaw,  
John Barfield**

**IDRC Aquaculture Teams**

**May 8-9, 1983**

**Dr. Brian Davy, Dr. Portala, Mr. D. Swar &  
Mr. Bhole**

**IBRD Research Evaluation Teams**

**May 11-12, 1983**

**H.H. Groenwald, John Wyatt Smith and George Horton**

**AID: Dr. Charles Greenleaf, Head of AID in Asia**

**Oct 12, 1982**

**Rocky Staples, AID/Washington**

**Jan 3, 1983**

**Dr. Irving Asher, AID Science & Technology**

**Dec 17, 1982**

**Administrative visits to USA**

**Professor Ram Chandra Bahadur Singh, Vice Chancellor and Mr. M. Haque,  
Dean, Institute of Forestry, Tribhuvan University visited Michigan State  
University in November 1982.**

## IAAS PERSONNEL

### Dean

A period of uncertainty regarding IAAS administration ended in December, 1982 with the announcement of Mr. Hindeswari Prasad Sinha's appointment as Dean, IAAS. Mr. Sinha has had more than 17 years experience with ICG Ministry of Agriculture and most recently was Director of Agriculture of the Eastern Zone. He is an agricultural extension specialist with his B.Sc. in Entomology from Allahabad, India and his M.Sc. in Entomology from the Indian Agricultural Research Institute, New Delhi. He has had experience as a training officer at University of California. His arrival in January provided IAAS with the first permanent Dean since the departure of Dean N.B. Basnyat to become Registrar, Tribhuvan University, Kathmandu.

Mr. Wanda Joshi, Lecturer in Animal Science, had served as Acting Dean, 1981-1982. He left Rasapur in September 1982 to begin a Ph.D. program in Animal Nutrition as a MUCIA/USAID participant trainee at Michigan State University. Mr. Joshi earned his M.S.(1978) in Poultry Nutrition from Ohio State University also as a MUCIA/USAID participant trainee.

Dr. Tej Bahadur K.C., Reader in Soil Science, succeeded Mr. Joshi as Acting Dean and served until Dean Sinha's appointment was effective in January, 1983. Dr. K.C. earned his doctorate (1982) in Soil Science at University of Wisconsin as a MUCIA/USAID participant trainee.

### Assistant Deans

Dr. Tej Bahadur K.C. continues as Assistant Dean (Academic Affairs).

Dr. Kailash H. Pyakuryal was appointed Assistant Dean (Administration).

He received the Ph.D. degree in Rural Sociology from Michigan State University (1982) as a MUCIA/USAID participant trainee.

#### **Awards**

Mr. Pradeep Tulachan was the recipient of the Best Teacher Award from the National Education Committee in February 1983.

Gold medals were awarded by His Majesty the King Birendra on February 24, 1983 to Drs. Tej Bahadur K.C., Fanindra Neupane, and Kailash Pyakuryal in ceremonies in Kathmandu. These three senior faculty members of IAAS all completed their Ph.D. degrees at U.S. Universities as MUCIA/AID participants. The awardees were honored with a reception at IAAS upon their return on February 25.

## PLANNING

In late 1982 MUCIA advisors began development of a specific work plan to supplement the general one developed in June, 1982 by Dr. Kim A. Wilson, Michigan State University, and Dr. Andrew D. Sofranko, University of Illinois. Even though this operation was slowed initially by Desain and Tihar festival holidays and by the uncertainty concerning the new Dean, discussions were begun with departmental groups. In February, 1983, Dr. Darrell Fierup, MUCIA Campus Coordinator, and Mr. Gary Alex, USAID/H, Project Officer, came to Rampur and the detailed planning was completed. The document developed indicates the specific activities of each advisor, as well as the activities for which IAAS assumes full responsibility. A maximum of eight short-term consultants was envisioned and the general responsibilities of each and the preferred times of service listed. Non-degree training was given considerable emphasis with up to 10 faculty members to attend USDA short courses in the U.S. Provision was also made for training for IAAS administrative staff to improve their competence in managing the institution. Three study/observation tours were planned, with each advisor to lead one to broaden the experience of selected faculty members.

Budget projections were made to the end of the contract. IAAS was provided an estimate of MUCIA funds that could be spent for the various activities mutually agreed upon. This has helped the planning activities of Dean Sinha and those he has appointed to assist him in this effort.

Expenditures for research, teaching, and extension equipment were projected. Purchase of an automobile for IAAS and some support for student activities were provided for. Improvement of IAAS farms, including land-leveling, fencing, and some livestock and nursery stock acquisitions was budgeted.

## ADVISORS' REPORTS

### Animal Science

Basic to the planning of the Animal Science program has been the development of a rationale within which to develop the livestock programs. Some of the basic concepts are:

1. Roughages are the principal fodder source in Nepal. Grain supplies are insufficient to meet human needs and cannot be depended upon as an economical livestock feed resource.
2. Therefore, ruminants will be the most important livestock for development in Nepal with poultry and swine largely as scavengers.
3. Commercial milk production should be emphasized for all ruminants (cattle, buffaloes, yak, sheep, and goats) in addition to their other economic traits, as milk production greatly increases the efficiency of livestock systems and yields food products of high nutritional value.
4. Because slaughter of cattle is forbidden in Nepal and because of the low reproductive rate of both cattle and buffaloes, greater returns from development investment will come from sheep and goats developed for commercial milk as well as for meat and fibre production; cattle research should be concentrated on development for draught purposes.
5. Land suitable for food crops should be so utilized with livestock fed the crop residues. Forage crops should be grown only on such land as is unsuitable for food crops or in crop rotations to enhance food crop production.

The development of this rationale began with the Animal Science Advisor's short term consultancy in January-February 1982 and is stated in that end-of-tour report. Each Animal Science faculty member participated in a series of training seminars by describing one of the animal production systems of Nepal. In the fall, a series of planning meetings was held and major priorities incorporated into the 1983-1984 work plan.

Major aspects of the work plan completed or implemented include:

1. Training

**ICRISAT Short-Course:** Three IAAS Faculty members attended, as indicated elsewhere. The bullock-drawn wheeled tool-carrier offers a technology intermediate between traditional bullock traction and tractors for farming the IAAS farms and large production blocks such as those in the Integrated Cereals Project.

**Mediterranean Livestock Tour:** Five participants were introduced to a more complete array of livestock systems than they had previously seen especially including commercial milking of multi-purpose Greek Chios sheep and Damascus (Shami) goats, which could form the basis for effective livestock development in Nepal. The buffalo milking system of Italy was also included as well as a brief inspection of Italian Chianina cattle which could be useful in the production of improved draught bullocks. Production of milk cheeses and yoghurt under technologies varying from traditional village hand-milking and home cheesemaking to mechanized milking and industrialized milk processing were seen throughout the tour.

Reports are being prepared by the advisor and each participant and a group seminar will be presented with photos, slides and relevant souvenirs from the tour.

**U.S.D.A. Short Course:** Two Animal Science lecturers departed the end of May for Colorado State University for a six weeks course, Management of Small Crop and Livestock Farms. Planning and budgeting are such needed skills for developing the Animal Science programs.

2. Establishment of *Leucaena Leucocephala* (Ipil-Ipil). Establishment of the tropical forage legume, *Leucaena leucocephala*, on the non-arable banks of the watercourse on the North Farm has been an urgent priority. K.R. Tiwari, Lecturer in Animal Science, received a MUGIA research grant in late 1982 to make experimental plantings. The visit of Dr. James Brewbaker, University of Hawaii, added impetus to the project. Volunteers Anne Waanders and Helrich van Rees, third year students at RHLS (Tropical Agricultural College, The Netherlands), undertook the production of 18,000 *Leucaena* seedlings of six varieties for the planting of one hectare including a forage/woodlot plot and a hedgerow forage plot. Planting now awaits construction of a protective fence.
3. Livestock Identification: Permanent identification by tattoo and/or tagging of every animal at IAAS was another high priority, generally, the memories of herdsmen have been relied upon to match animals to herd book numbers. After seeing the identification used by livestock breeders on the Livestock Tour, recently appointed Livestock Farm Manager, Nagendra Shah, has commenced tattooing using a system which combines herd letters, IAAS, with a number unique to each animal.

4. **Other Developments:** Before the arrival of the present MUCIA team, construction had begun on a research facility for the rearing of fish with ducks and other livestock. The facility is now near completion. However, due to errors in location, layout and design, (error beyond the control of the present team) the facility will not be useable for integrated fish and livestock production and will be of but limited use as a fish research facility because of inability to control water quantity and quality.
5. **Research:** I.P. Dhakal, Assistant Lecturer in Animal Science had completed research into the incidence of liver flukes in IAAS cattle and buffaloes. K.T. Augusthy, Lecturer in Animal Science has researched the toxic effects of selected plants on trash fish. The fish poisoning project, funded by International Development Research Centre (IDRC), Canada, was of sufficient merit to attract offers of assistantships for Ph.D. study.

One research project was terminated due to management problems, and additional projects by M. Sapkota (pig feeding), K.R. Tiwari (*Leucaena leucocephala*), and Nagendra Shah (buffalo milk analysis) were funded by MUCIA.

6. **Extension:** A Farmer's Dairy Field Day was held on 25 May with 25 invited farmers attending including a few women. Following a tour of livestock facilities, members of the Animal Science Department and the advisor lectured and answered questions on various aspects of milk production and processing. Ice cream made by Nagendra Shah, Lecturer in Animal Science and dairy processing specialist, was served as refreshment. Animal Science staff have participated in other general

field days at IAAS, but the Dairy Day was the first special animal science extension field day.

K.R. Tiwari and I.P. Dhakal have offered veterinary service to the community through the IAAS extension office. Dhakal has also maintained his own private veterinary practice.

7. Future Developments: Construction of a biogas plant is planned for the immediate future. Other plans include the ordering of weigh scales and other equipment including wheeled tool-carriers to complete the commitment to farming IAAS farms with animal traction.

Regaining control of the North Farm by preventing encroachment of villagers and their livestock remains the most basic outstanding item in the work plan. Funds have been budgeted for construction of a sheep-tight wire fence. However, the view is held by some at IAAS that nothing less than a brick wall will suffice. The cost of a wall two metres high by seven kilometres long is beyond present budgetary resources. However, the present situation not only results in enormous losses of forage from the farm but continuously exposes IAAS livestock to the introduction of disease. Introduction of needed breeding stock depends upon some reasonable disease control.

A dairy processing plant of at least 1000 litres per day capacity for cheese and yoghurt production is also basic to development of IAAS livestock production.

A Chitwan Irrigation District Project with funding from the Asian Development Bank, to provide some buffaloes and goats to enhance the IAAS breeding programs has been postponed.

The World Bank has proposed to include funding for certain livestock facilities and technical assistance in the fiscal year beginning in 1984.

Progress has been made in developing new concepts of livestock development with the staff through training programs and research projects. Implementation of other aspects of the work plan has commenced, building on the training experiences.

#### Other duties

The Animal Science Advisor also serves as MUCIA liaison person for safety and medical, for library, and for computer. Additional information on those subjects will be found elsewhere in the report.

## Plant Science

The Wilson-Sofranko work plan appropriately states in regard to the Chief of Party position: " ... the person selected should spend, and be permitted to devote, a majority of time on administration and management of the project. Inputs in the area of specialization are important but deemed to be a secondary responsibility" (footnote, page 52)

This advisor has found that the administrative duties have taken nearly all his time and energy thus far. In addition to the usual duties of an administrator of a small unit, the Chief of Party of this contract has duties undreamed of in a present-day U.S. University. These include:

1. Being personally responsible for all expenditure of local currency. (It took three days to open the project bank account in Kathmandu and frequent trips are required for project business)
2. Having responsibility for the welfare, housing, transportation, power and water supply for team members and families, some local employees and families, short-term advisors, visitors, and providing some logistical support for IAAS faculty members and families and students.
3. Continually communicating with AID in Kathmandu and with project personnel in East Lansing regarding all matters concerning the project. Since there is no telephone in Rampur, this involves innumerable radio messages, cables, memos, letters, and personal trips. (AID approval is required for all expenditures over \$200 and for almost any action proposed.) IAAS concurrence is required on most actions unless resulting from a direct request from IAAS.

The recent delegation of responsibility to the Program Assistant for many routine matters should help to make more time and energy available for technical assistance to the faculty in plant sciences in the future.

The Plant Science Department at IAAS include Agronomy (Crops and Soils), Horticulture, and Plant Protection (Entomology and Plant Pathology). The Crops and Soils department was recently divided into the Agronomy Department and the Soil Science Department.

The advisor attended numerous faculty meetings of each of the three previous departments and held detailed discussions with the faculty groups in development of the specific work plan. Items considered were: short-term consultants to be requested, equipment needs, training needs of faculty for teaching, research and extension, research projects underway and to be initiated, farm development, curriculum revisions, and irrigation needs.

Three members of the Plant Science departments went on the two tours now completed. These gave opportunity to see varied crops and soils, research applicable to Nepal, and to interact with their colleagues in animal sciences and social sciences.

Two members of Plant Science Departments attended the short-course on Wheeled tool-carriers at ICRISAT.

Four Plant Science faculty members are getting additional training in U.S.D.A. short-courses this year. These include the following subject-matters areas: soil fertility, vegetable crop production, integrated pest management, and post harvest technology.

One new research project has been initiated in the plant sciences. D.N. Yadav's study of crop production variables of Moong should contribute to higher production of this important cash crop for the Terai.

The advisor visited the United Missions furniture factory at Butwal to inspect furniture being made for the IAAS library and also visited the biogas plant at Butwal. The branch campus at Paklihawa was visited briefly also but students were absent from campus and only a few instructors were there. The trip was in company with Assistant Dean K.C. and Project Manager Ashok Malla.

Dr. Maxine Thompson, Department of Horticulture, Oregon State University served as a consultant on the project April 17-20, 1983. Her report is attached as Appendix IV to this report. She made some pertinent observations about the horticultural program at IAAS. Unfortunately the Plant Science Advisor was out of country during her visit and unable to confer with her personally. She serves as major advisor to Gyan Kumar Srerestha in his doctoral program at Oregon State.

## The Rural Development Division and the Extension Education Program.

### 1. Short-Term Visit Summary

This period (September 27-October 16, 1982) is covered in more detail in Dr. Whittier's short-term report. It should be noted that there had been very little MUCIA involvement in the Rural Development Division during the period of June-September 1982.

### 2. Long-Term Assignment

#### A. Rural Development Division

##### (1) Manpower and Staff Development in Rural Development.

This reporting period has seen a great deal of activity in the Rural Development Division. Two new staff members were added (Mr. Marsingh Gupta and Mr. Cholendra Ghimire) and one of these (Mr. Cholendra) has moved to the Paklihawa branch campus. Throughout most of the reporting period, there were 6 staff members present on campus, although there were 9 at the end of the reporting period.

##### a) Training:

During the reporting period, Dr. Kailash Pyakuryal completed his Ph.D. in Rural Sociology at Michigan State University and Mr. Bishnu Bhandari returned to IAAS to complete the research for his doctoral dissertation from University of Wisconsin. Mr. Ganesh Srivakoti went to the Netherlands for a ten-month non-degree course in rural development. Mr. Narayan Kumar made a two-month trip under MUCIA funding to the Philippines, Thailand, and Korea to study agricultural communications systems and audiovisual services systems. Mr. Pradeep

Tulachan attended an ADC-funded Short-Course in Bangkok on Socioeconomic Aspects of Livestock Production. Dr. Pyakuryal participated in the MUCIA-funded Rural Development/Agricultural Development Tour and Mr. Bhola Pokharel in the MUCIA-funded Animal Science Tour. During the reporting period, arrangements were made for two Division staff members to go to the U.S. for USDA Short Courses: Mr. Kumar for a course on Agricultural Communications and Mr. Suvedi for a course on Extension Education.

b) Research:

As noted above, one member of the staff is doing his doctoral research which involves socioeconomic stratification in migrant villages in the Terai. Mr. Harayan Kumar is continuing his work (funded by MUCIA) on the use of radio communication for farmer education. Mr. Pradeep Tulachan has continued his work on farming systems in Chitwan and presented a paper at the 10th Annual Seed Conference. Mr. Bhola Pokharel is researching IAAS's B.Sc. graduates and their current employment situations.

c) Public Services:

The activities of the Rural Development Division in public service are covered in the section on Extension Activities.

d) Participation in IAAS Affairs:

Members of the Division staff are very active in campus life including the Extension Committee, the Library Committee, the Hostel Committee, the Property Management Committee, IAAS Budget Preparation Committee, the Campus Development Committee, and the Staff Evaluation Committee. During the reporting period, Dr. Pyakuryal was appointed to the position of Assistant Dean for Administrative Affairs, and other Division staff held the positions of Extension Committee Coordinator, Seminar Coordinator, and Hostel Warden. Mr. Narayan Kumar was editor of the IAAS Journal and Mr. Ebola Pokharel reactivated and edited the campus newspaper, Rampur Roundup.

e) Off-Campus Consultancies:

In addition to their campus duties, members of the division staff held at least seven consultancy positions with USAID, APROSC, RCUP, UNICEF, IDS, and FMG's Ministry of Panchayat and Local Development.

Obviously, the staff of the Rural Development Division has been very active in all areas of campus life as well as in activities leading to individual professional growth and development and the development of the Division. The number of outside consulting positions held indicates that IAAS'S Rural Development Division is well regarded outside as well as within the Institute. The Division still has several staff members completing advanced degrees abroad (see Participant Training section). It should

also be noted that the Campus Chiefs of both the Lamjung and Paklihawa branch campuses are former members of the Rural Development Division staff of Rampur.

(2) **Advisors Activities with the Rural Development Division.**

One of the general activities of the advisor has been in trying to regularize meetings of the Rural Development staff to better coordinate Division activities. Many hours have also been spent in informal interactions with staff members discussing such issues as teaching methodology, research problems, and curriculum modifications; the advisor regards this kind of informal interaction as an aspect of his task.

Specifically, the advisor worked with the Rural Development staff on refinements in the project workplan needed in conjunction with the project amendment. The advice of the Rural Development staff was solicited particularly in the areas of the advisor's workplan, the training needs of the Division, and the kinds of short-term advisors the Division would find most useful.

During the reporting period, the advisor and various Rural Development staff visited several agencies and projects, including the Agricultural Projects Service Centre (APROSC); the Center for Economic Development Administration (CEDA); the Center for Nepal and Asian Studies (CEIAS); Food and Agriculture Organization (FAO); the Agricultural Development Council (AD); the Khumaltar Agricultural Research Station; UNICEF; ILO and

WHO. Local projects visited include the Biogas Research Station in Butwal and the Fish Research Station in Bhairahawa.

In March 1983, the advisor accompanied the Dean and a member of the Rural Development staff to the branch campuses at Lanjung and Paklihua to meet with staff and students to find out what they considered to be the major problems at their campuses. The advisor's reports on these trips are included as appendices to this report.

The advisor also sought the participation of the Rural Development staff in the planning of a study tour to Southeast Asia (concentrating on Indonesia). A summary of the activities of that tour is appended).

#### B. Extension Education

The advisor has worked with various teachers of the course on extension to refine course objectives and has participated in some of the course-related practicals (e.g., reviewing questionnaires and procedures taught to students, accompanying students and teachers on tours, helping coordinate student participation in farmers' training courses on campus).

The advisor has worked specifically with his counterpart, Mr. Pradeep Tulachan, Extension Committee Coordinator. Mr. Tulachan reports directly to the Dean, and his committee consists of a member of each department as well as MUCIA advisors. The Extension Committee has worked to revitalize and enhance the Pilot Extension

Project by adding new, permanent staff members to the office in Rampur and preparing equipment lists and purchasing (with MUCIA funds) equipment so that the PEP could provide additional services to farmers.

The Extension Committee coordinated and helped plan several other activities during the reporting period.

- (1) Coordination of IAAS's presentation of agricultural developments at the Devighat Mala (January 15, 1983). At this religious holiday, IAAS and 12 government agencies provided information through visual aids and printed materials. Attendance at the event was estimated at between 10,000 and 30,000.
- (2) Planned and coordinated IAAS's Farmers' Fair - March 8, 1983. All IAAS units participated in this event and more than 400 farmers were present. The event was highlighted by ice cream prepared for everyone by Mr. Nagendra Shah, newly appointed IAAS Livestock Farm Manager.
- (3) Provided planning, coordination, and logistic support for the Horticulture Department's one-day training session for 30 farm women from the Pilot Extension area. The Extension Committee selected participants to be representative of each ward and of each caste/ethnic group in the ward. The group first toured the horticulture farm to observe hot season vegetable cultivation. This was followed by presentations on kitchen gardening and food preservation by staff members.

The participants played an active role in demonstrations of preparation of pickles, jams, and fruit juice concentrate, and each participant was able to sample the products. The Dean presented certificates to course participants.

- (4) Helped with planning, coordination, and logistic support for the Animal Science Department's Dairy Day, a one-day farmers' training session held on May 25, 1983. It was attended by 25 farmers, including 3 women.
- (5) During the month of June, three members of the Extension Committee participated in the study tour to Thailand and Indonesia. Throughout the tour special attention was given to the university's role in public service and extension programs. This information will be shared with the rest of IAAS staff in reports and a seminar scheduled for presentation in August 1983.

#### C. Other Activities

During the reporting period, the Rural Development Advisor was a member of several committees, including the Research Committee, the Extension Committee, the Campus Development Subcommittee on Furniture for Staff Quarters and Institute Facilities, and the special Staff Evaluation Committee.

A great deal of time was spent working with the MUCIA team and the USAID Project Officer in preparing an amendment to the Project Paper so that it would reflect Trichuvan University's and IAAS's change in policies and objectives for the development of IAAS and its graduates.

As did other MUCIA advisors, the Rural Development advisor provided support and assistance to people from other agencies and project teams visiting IAAS. Two World Bank teams visited to conduct re-evaluations of IAAS and branch campus capabilities with regard to a projected World Bank-funded project on agricultural manpower development. In addition to providing information and copies of reports on the branch campuses, the advisor accompanied one of the teams on a visit to the Lamjung campus. The RCUP Project in Hetauda also sent a team to IAAS to see IAAS's extension activities and orientations. The advisor spent half a day with them and arranged meetings with other members of the Extension Committee.

### 3. Areas of Challenge

IAAS is in a period of rapid institutional development. Most of the staff who were involved in advanced studies abroad have returned to the campus. The new Dean has encouraged a spirit of cooperative professional enterprise among the faculty. This area of growth has been neglected in the past and should be encouraged. There is need for encouragement of greater professional responsibility to students, including meeting classes regularly and preparing and using adequate teaching materials (e.g., course outlines, syllabuses, class handouts). New staff evaluation guidelines now being developed may aid in encouraging the responsibility.

In the Rural Development Advisor's short-term report, he agreed with a previous team leader's (Dr. Wood) suggestion of introducing a home science component to IAAS to attract female students. This idea

bears some refinement. Such concerns as nutrition, food processing and preservation, and kitchen gardening should not be the concern of women only. Should IAAS consider adding such a component, the course should be required of all students. To development a department, unit, or area of study labelled "women only" might further disenfranchise women from the development process. Indeed, a better perspective on the role of women in agriculture in Nepal needs to be introduced into many existing courses, particularly in the Rural Development Division, and a greater effort should be made to attract and support capable female students.

A final challenge is in the area of sharing the fruits of professional development opportunities, research results, and other information with colleagues. Many seminars have been presented by visiting specialists but, to the advisor's knowledge, none have been presented by IAAS staff during his tenure as an advisor. The new seminar coordinator has actively sought the involvement of his colleagues, to the point of mailing a request to each staff member to present a seminar but none have been forthcoming. The staff submits the required reports on funded research projects and articles are published in the IAAS Journal.

Papers are presented off-campus (e.g., three papers by IAAS staff at the 10th Annual Seed Conference sponsored by ICP at the Maize Farm), but reports to fellow staff members on study tours and short courses or even on M.Sc., Ph.D. or other research are absent. Everyone could benefit from the sharing of information and researchers in particular

could benefit from the constructive criticism of their colleagues. Whether this reluctance to present one's work to colleagues stems from a fear of criticism or from a feeling of lack of incentive, a change in attitude in this area is necessary for a spirit of professionalism to emerge at IAAS.

## TRAINING

### MUCIA Funded Participants Who began Degree Studies Abroad.

<u>Name</u>	<u>Field of Study</u>	<u>STD<sup>1</sup></u>	<u>EDDC<sup>2</sup></u>	<u>Location</u>
1. Gyan K. Shrestha	M.Sc.Horticulture Ph.D.Horticulture	8/26/82	- 08/84	Oregon State Univ.
2. Nanda P. Joshi	M.Sc.Poultry Sci. Ph.D.Poultry Sci.	8/26/82	- 08/84	Mich. State Univ.
3. Badri B. Basnet	M.Sc.Ag. Engin.	1/01/83	- 08/84	Asian Inst. of Tech., Bangkok

### MUCIA Funded Participants Whose Degrees Were Still in Progress.

1. Bal K. Sharma	M.Sc. Dairy Sci.	8/10/81	- 08/83	South Dakota State
2. Laxmi Subedi	M.Sc. Agronomy- Rice Breeding (extended without permission to continue for Ph.D. without MUCIA funding)	5/26/80	- 11/82	Los Banos, Philippines
3. Ganesh M.S.Adhikari	Ph.D.Ag. Econ.	9/07/81	- 09/83	Mich. State Univ.
4. Bishnu Ehandari	Ph.D. Rural Soc.	8/10/81	- 08/84	Univ. of Wisconsin
5. Tika B. Adhikari	M.Sc. Plant Path.	11/15/81	- 11/83	Los Banos, Philippines
6. Mohan Kharel	M.Sc. Animal Sci.	11/15/81	- 11/83	Los Banos, Philippines
7. Shyam K. Shah	M.Sc. Animal Sci.	11/15/81	- 11/83	Los Banos, Philippines
8. Durga M. Gautam	M.Sc. Post Harvest Tech.	11/15/81	- 11/83	Los Banos, Philippines
9. Jagdish Timisina	M.Sc. Agronomy	11/15/81	- 11/83	Los Banos, Philippines
10. Ganesh Dahal	M.Sc.Plant Path.	11/15/81	- 11/83	Los Banos, Philippines

### MUCIA Funded Participants Who Completed Degrees and Returned to IAAS.

1. Gopi Upreti	M.Sc.Horticulture	8/10/80	- 2/13/83	University of Hawaii
2. Nagendra Shah	M.Sc.Dairy Tech.		- 09/82	South Dakota Univ.
3. Beshan B. Thapa	M.Sc. Entomology		12/82	Mich. State Univ.

1. Time of Departure from Nepal
2. Estimated Date Degree Completed.

4. Kailash N. Pyakuryal-Ph.D. Rural Soc. - 09/82 Mich. State Univ.
5. Dainik B. Nepali M.Sc. Animal Husb. - 08/82 Hissar Agri. Univ.
6. Dilli R. Baral M.Sc. Horticulture 3/17/81 - 06/83 Ohio State Univ.

MUCIA Funded Participants in Non-Degree Programs.

1. USDA Short Courses in U.S.A.

The following faculty members departed or were scheduled to depart to attend short courses offered by the U.S. Department of Agriculture at various Universities in the U.S.

Name	USDA Course No.	University	Departure Date
1. Srichandra Sah	TC 120-5	North Carolina State Univ.	June, 1983
2. Krishna B. Tiwari	TC 140-28	Colorado State University	June, 1983
3. Dainik B. Nepali	TC 140-28	Colorado State University	June, 1983
4. Chandra K. Mandal	TC 130-8	Purdue University	June, 1983
5. Durga Dhakal	TC 130-11	Rutgers University	July, 1983
6. Narayan Kunwar	TC 110-3	Iowa State University	July, 1983
7. Murari Subedi	TC 110-5	University of Wisconsin	Sept, 1983
8. B.L. Singh Dongol	TC 110-5	University of Wisconsin	Sept, 1983
9. Deonath Yadav	TC 150-7	Cornell University	Sept, 1983

2. Study/Observational Tour to Thailand, Indonesia, Singapore.

June 1-29, 1983. Summary report is in Rural Development Advisor's report and full report is in appendix. The following IAAS faculty members attended:

B.P. Sinha  
 K.N. Pyakuryal  
 S.M. Shakya  
 B.N. Khakural  
 K.T. Augusthy

3. Study tour to Greece, Italy, and Cyprus. June 3-25, 1983. Summary is in Animal Science Advisor's report. Full report is in appendix. The following IAAS faculty members attended:

B. Pokharel  
 M. Sapkota

B.B. Pant  
N. Sah  
J.L. Yadav

4. Short course on wheeled tool-carriers at the International Center for Research in the Semi-Arid Tropics at Hyderabad, India, May 1983. The following faculty members attended:

M.L. Prasad  
R. Koirala  
S. Tiwari

5. International Conference in Jakarta, Indonesia, August, 1982.  
Attended by Bholu Pokharel.
6. Chesraun II Conference in Manila, December, 1982.  
Attended by Rishi Adhikari
7. Study tour of agricultural communications in Philippines, Malaysia, Thailand, and Korea:  
Attended by Narayan Kumar
8. Visit to University of Wisconsin, May, 1983 -- after attending a workshop at North Carolina State University under sponsorship of the International Maloidogyne Project. Dr. Panindra Neupane.
9. Visit to Michigan State University and University of Wisconsin, June 19, 1983 -- at end of study course in the Netherlands sponsored by the Netherlands. Ganesh Shivakoti.
10. Other training planned.
- Non-degree training has been requested for P.P. Sharma in the use of microcomputers in agriculture and for Rishi Adhikari in fruit preservation. Suitable programs are still being identified to fill these needs.

Non-MUCIA Funded Participants Who Began Degree Studies Abroad.

<u>Name</u>	<u>Field of Study</u>	<u>Location</u>
1. K.P. Sharma	M.Sc. Crop Science Ph.D. Crop Science	South Dakota State University

Non-MUCIA Funded Participants Whose Degree Studies Still in Progress.

1. Laxmi Subedi	see section IA2 #2	
2. Chandra M. Shrestha	Ph.D. Ag. Economics	University of Kentucky
3. T.P. Nepal	Ph.D. Agronomy	Iowa State University
4. T.N. Mallick	Ph.D. Statistics	India (USAID Financed)
5. Ananda Shrestha	Ph.D. Ag. Chemistry	India (USAID Financed)
6. Ram Chandra Sharma	Ph.D. Agronomy	Oklahoma State University
7. Nanda K. Mishra	Agronomy	India

Non-MUCIA Funded Participants in Non-Degree Programs

1. Pradeep Tulachan - Participated in ADC sponsored training course on Socio-economic Aspects of Livestock Production.
2. Ganesh Shivakoti - Rural Development Training, Netherlands. Funded by the Netherlands Government. August 1982-June 1983.
3. Santa B. Gurung - Extension Education. The Netherlands. September 1982-August 1983.

## TEACHING

Little concrete progress can be reported regarding teaching improvement at IAAS during the period of this report. Each advisor has discussed with counterpart departments the need for preparation of detailed course outlines. Faculty members have long recognized the need, yet the outlines do not get prepared. The situation in regard to syllabi and textbooks is the same.

## Curriculum

The IAAS curriculum committee prepared a draft proposal of the curriculum for B.Sc. under the annual system of instruction. It has from 8 to 11 courses for each student to take each week. It has only 2 elective courses during the four years, but lists 28 elective course possibilities. Just after the end of the reporting period, the curriculum was presented to the IAAS Faculty Board. The animal science and the plant science advisors attended the meeting and raised serious questions about the number of courses which must be taken simultaneously and about the insufficiency of elective courses. The animal science advisor prepared a revised curriculum which combined a number of courses and required only 5 or 6 courses to be taken each week. This revision was solidly rejected by the Faculty Board. The Faculty Board approved the draft proposal of the curriculum committee with strong support from IAAS faculty members who attended.

## Evaluation

Attention is being given to ways to evaluate teaching, research, public service activities and other duties and a faculty committee is studying the subject. The rural development advisor is a member of the committee. In the

seminar on faculty evaluation, the plant science advisor discussed need for evaluation, philosophy of evaluation, and various systems of evaluation in use in U.S. universities and in some developing countries. Course and teacher evaluation forms were presented. It was pointed out that evaluation serves little purpose unless superior performance can somehow be rewarded. Dean Sinha recognizes this but thus far has not been able to initiate a rewards system in terms of merit salary increases. We would like to report that selection of faculty for additional training in short courses, observational tours, etc., is solely on the basis of merit. It is apparent however that many other factors enter into the selection even though merit is a strong factor.

#### Seminars

Consideration has been given to seminars on teaching improvement. A recent faculty meeting discussed the possibility and one advisor volunteered to give a seminar and suggested faculty members give others. No definite plans have yet materialized for such seminars. A short-course to be held at Rampur on teaching was included in the work plan and preliminary negotiations are underway to arrange this during the 83-84, academic year.

## RESEARCH

### Research at IAAS Funded Under MUCIA Project

#### Procedures

In late 1981 and early 1982 an agreement was reached by IAAS, T.U., AID, and MUCIA regarding accounting and auditing of funds provided by AID through MUCIA to IAAS for research project support. The agreement provides that:

1. A research project may be considered as being approved and eligible for funding by MUCIA when all of the following have been accomplished:
  - a) Project is approved by the IAAS research committee
  - b) Project is signed by Dean, IAAS
  - c) Project is signed by MUCIA Team Leader
  
2. An initial allocation of funds—usually the amount estimated to be needed during the first six months of research—will then be transmitted to IAAS by MUCIA to be disbursed by IAAS on the written request of the leader for that project.
  - a) The funds for each project are to be kept in a separate account by IAAS. The account will be recorded by IAAS according to the rules and regulations of the Central Campus of Tribhuvan University. The funds do not lapse nor become subject to capture at the end of the IAAS fiscal year. Any returns generated by the project will go into the IAAS research fund to be utilized by IAAS in support of research.
  
  - b) The MUCIA Team Leader sends a letter of transmittal to the

IAAS fiscal officer with the check and sends a copy to the project leader and Dean.

- c) The IAAS fiscal officer or other designated official acknowledges receipt of the check by memo to MUCIA.
3. When an additional allocation of already approved funds is needed for a research project, a progress report will be submitted to Dean, IAAS and MUCIA Team Leader indicating what has been accomplished up to that time and giving the budget expenditures made for the project to date. A copy of the progress report should go to the Research Project Secretary for information, but no additional action is needed by the Committee since funds have already been approved. Upon receipt of this report and the request for additional funds, another allocation of funds will be transmitted to IAAS by MUCIA for the project account.
4. At the end of each six month period, a report of progress made and of funds expended will be sent to Dean IAAS, MUCIA Team Leader and Research Committee Secretary, even if no additional funds are requested.
5. If additional funds are required beyond the amount initially approved for the project, the project leader should submit a written request through the same channels as the original proposal. The request may then be considered by the Research Committee IAAS, and upon approval by that body, may be submitted to Dean IAAS and MUCIA Team Leader for approval and additional allocation. A progress report and an accounting of funds spent must accompany the request for additional funds.
6. When the research project has been completed, an end-of project report will be submitted giving research conclusions and complete budget

expenditures. Any funds already transmitted by MUCIA for the project and not expended for the specified research shall be returned to MUCIA with the end-of-project report.

7. expenditure of funds for research as provided by MUCIA will be reviewed by AID auditors during their review of the IAAS/MUCIA project.

At the time the present Team Leader took over the duties on November 18, 1982 19 IAAS research projects had been funded by MUCIA. A total of \$ 746,884 had been committed to these projects. This is equivalent to about \$ 50,000 and represents about one-third of the amount budgeted for research support to the end of the contract. There were no copies of project outlines in files of either the MUCIA office nor Dean's office. Copies were obtained from the Secretary of the Research Committee, but no copies signed by Dean, IAAS or MUCIA Team Leader were located. The approval process has now been completed by the signing of a blanket letter of approval for all 22 projects.

A revision of the research project outline was suggested and was approved for use in all future projects submitted. This provides for signatures of approval directly on the outline.

The membership of the IAAS research committee was enlarged to permit all three MUCIA team members to sit on the committee instead of just the Team Leader. Since research projects submitted and discussed in the committee meeting may come from any subject matter area, better evaluation can result with input from those with specialization and responsibility in the subject matter area.

There continues to be a problem in obtaining the needed progress reports on

research projects. Many submitted have little substantive information about what has been done in the project or what has been learned. Project leaders report difficulty in getting expenditure amounts and tabulations from the IAAS business office. Some projects have reached the termination date, but neither renewal requests nor final reports have been received.

### New Projects

Information about the first 13 projects funded was given in the progress report for the first six months of 1982. Following is similar information about projects 14 through 22 (k 14-22 = \$1.00).

14. Chemical Control of Root-Knot Late Blight Disease Complex on Tomato; Powdery Mildew of Pea; and Alternaria Leaf Spot of Mustard.

Principal Researcher, S.N. Shrestha (k 19,039).

The effect of fungicides and insecticides used jointly are compared with fungicides and insecticides alone on the diseases complex of tomato. Kerethane and Bavistin are compared for control of powdery mildew of peas. Different systemic and non-systemic fungicides are evaluated for control of Alternaria leaf spot of mustard.

15. Fungicide Control Trial Against Stem-gall of Coriander Under (i) in Vivo and (ii) Field Condition: Principal Researcher, L.N. Bhardwaj, (k 5,698).

Three fungicides, each applied either by spraying, by seed treatment and soil treatment, and by soil treatment alone, are tested for ability to control stem-gall of coriander. Coriander is an important spice crop, grown primarily in kitchen gardens in Nepal.

16. Effect of Nitrogen and Sulphur Fertilizers on Yield and Oil Content of Mustard Crops. Principal Researcher, S.C. Sah (Rs 32,961).

Since nitrogen and sulfur are essential elements for mustard growth, possible synergistic effects of these elements on grain yield, nutrient concentration and oil content of mustard grain are evaluated. Mustard is the main cash crop of Chitwan farmers.

17. To Study the Biological Performance and Economic Effects of Raw Mustard Cake as Compared to Raw Ground Soybean on Swine. Principal Researcher, M. Sapkota (Rs 46,246).

The feasibility of replacing raw ground soybeans with raw mustard cake in the swine ration is studied. Soybeans are used directly as human food whereas mustard cake is not. Feed efficiency and economy of production are evaluated.

18. Incidence of Liverfluke Infection in Dairy Cattle of Livestock Farm of IAAS. Principal Researcher, I.P. Dhakal (Rs 6,402)

The incidence of liverfluke infection in different age groups of dairy cattle in the IAAS herd is to be determined as well as the average number of eggs per gram of feces in the different age groups.

19. Contribution of Dew on Winter Wheat. Principal Researcher, P.P. Sharma, (Rs 31,020).

During the wheat-growing season in Chitwan, a large amount of dew may be seen on plants and soil in the mornings. This experiment seeks to evaluate the contribution this dew makes to the water requirement of winter wheat. The additional effect of irrigation is also evaluated. Water-use by wheat under the various treatments is determined.

20. Leucaena-I-Studies on the Fodder Yield of Different Varieties of Leucaena leucocephala in Chitwan Conditions. Principal Researcher, K.R. Tiwari (Rs 63,290)

The six best available varieties of leucaena are evaluated for total dry matter yield. Seed is planted in plastic bags and seedlings produced under shaded conditions. Seedlings are then planted on spacing of 1m x 1m for wood and fodder and in closely planted hedgerows for fodder alone.

21. Studies on Variation of Certain Milk Constituents of Murrah Cows and Murrah Buffaloes Under Agroclimatic Conditions of Chitwan. Principal Researcher, Nagendra Sah (Rs 27,140)

This experiment evaluates the effects of seasons and stages of lactation on the composition of the milk of cows in the IAAS herd. The relationships amongst fat, SNF, and protein values at different stages of lactation are also studied.

22. Agonomic Studies on Moong (Vigna radiata) Sown at Different Dates and Row Spacing/Populations. Principal Researcher, D.N. Yadav (Rs 20,472).

Determination of the optimum time for sowing of moong is being made from the standpoint of both yield and quality. Three combinations of row spacing and plant population are tested. Initial and final nitrogen content of the soil will be determined.

#### Research at IAAS with Other Funding

Agro-Forestry project funded by International Development Research Center (IDRC), Ottawa, Canada; a cooperative project with the Institute of Forestry, Hetauda, Nepal.

Toxic effects of selected plants on trash fish funded by IDRC.

## PUBLICATIONS

Thorne, Marlowe D. 1982. MUCIA/IAAS Plant Science Advisor, 7-28 July 1982:

End-of Tour Report. 13pp mimeo.

Tulachan, Pradeep M. 1982. Constraints to the Adoption of Improved Technology on Inner Terai and Hill Maize Farms—a Case Study 1981.

Paper presented at the National Science and Technology Congress organized by the National Council for Science & Technology, 22-24 September 1982, Kirtipur, Kathmandu, Nepal and presented earlier as a seminar at IAAS. MUCIA/IAAS Occasional Paper #2. 23pp mimeo.

Whittier, Herbert L. 1982. MUCIA/IAAS Rural Development Advisor, 27

September - 26 October 1982: End-of-Tour Report. 31pp mimeo.

Wilson, Kim A. and Andrew D. Sofranko. 1982. Work Plan for July 1982, through September, 1984: IAAS/MUCIA Project. Prepared 16-30 June 1982, IAAS. 107pp mimeo.

In addition, MUCIA has published during this period the research proposals of the MUCIA funded projects as of July 1982 which have been listed in previous progress reports.

## SEMINARS

- Renfrow, Robert, Rockefeller Foundation, Bangkok. Maize Breeding 17 July 1982.
- Thorne, Marlowe D. 1982. Irrigation. 18 July 1982.
- Thorne, Marlowe D. 1982. Crop production. 22 July, 1982.
- Whittier, Herbert L. 1982. Some anthropological perspectives on rural development and extension. 5 October, 1982.
- Wood, Garland P. and Jeanne Wood. Trek in the Himal. 31 December, 1982.
- Carson, Brian (Canadian Land Resources Project), Soil Resources of Nepal. February 1, 1983.
- Douglas, Joimson (SPIS Consultant). Seed Programs in Developing Countries. March 7, 1983.
- Brewbaker, James (University of Hawaii and ICP Consultant). Ipil-Ipil, Leucaena leucocephala, March 24, 1983.
- Thorne, Marlowe D. Faculty Evaluation. March 27, 1983.
- Snuckler, Ralph H. (Michigan State University), New Research Opportunities in Science & Technology with AID Resource in Development Countries. April 6, 1983.
- Thompson, Maxine, (Oregon State University). Plant Breeding & Genetic Resources. April 18, 1983.
- Arinn, George (F.A.O.). How to Become a Professional Agriculturist. April 19, 1983.

## LOGISTICAL SUPPORT

### MUCIA

#### Local Staff

A review of classification of support staff was initiated as the duties of many no longer corresponded to their job descriptions. Also, USAID had increased the number of grades for local employees from 8 up to 12 and MUCIA had not changed to the new system. There was recognition of need for some salary adjustments. Some 20 Nepali staff who had all previously reported directly to the Chief of Party were divided into sections with lines of authority and responsibility delegated to senior staff members. There had been a somewhat similar organization chart prepared, but it apparently was not implemented in recent years.

Mr. Lok B. Ghale took over a newly created post of Program Assistant and continued to function as part-time electrical foreman. Durga B. Zoowa was promoted to Accountant/Cashier. Shankar Ranjitkar continued as Automotive Foreman and Ran P. Sharma as Maintenance Supervisor with responsibility for generators also. Dhruba Dass Srestha resigned from the post of Senior Administrative Officer. The personnel and duties of the staff of the Kathmandu office continued unchanged.

The program assistant has been delegated responsibility for approving overtime for local employees; for receiving shipments of equipment and supplies for MUCIA and IAAS, checking their condition and sending to storage or transmitting to IAAS; for handling IAAS requests for vehicles, fuel, spare parts, etc; for supervising the guest house, including

financial accounts; for preparing some responses to cables and letters; for supervising radio operation; and for attending some meetings with team members to keep himself better informed and to interpret when discussions are held in Nepali. He also assists in supervision of other senior staff members in charge of the sections.

### Offices

Additional space was made available by IAAS and a separate office was provided for the Chief of Party. IAAS and MUCIA staff can now meet in privacy with the Chief of Party without having to go to his home. Private offices have also been provided for the other two advisors. The radio room was partitioned off from the business office to permit privacy during radio transmissions. A room was made for storage of office supplies and for the two copying machines. No longer is it necessary for the office staff to go to the MUCIA compound numerous times each day to complete their work.

### Guest House

Cleaning and painting of the MUCIA Guest house kitchen and dining areas was completed and new dining furniture purchased. Thorough cleaning of the guest houses was completed and the living room furniture was reupholstered. The laundry of linens and towel is now being done in the compound laundry instead of by a local laundryman in less sanitary conditions. The guest house serves a vital function for the project to house short-term advisors and visitors. It also brings visitors from other projects of U.S. and other nations and

provides an interchange of ideas, as well as social benefits for the team families and IAAS faculty. The arrangement for the medical doctor from Pakistan resulted from a stay in the MUCIA guest house of a visiting team of Pakistani eye surgeons.

### Team Houses

Since no preparation had been made for cleaning or renovation of houses prior to the arrival of the animal science advisor or the new Chief of Party, houses for all team members were cleaned and painted in December, 1982. Recovering of living room furniture for all houses was done according to the preference of the individual families.

## IAAS

### Vehicles

A number of improvements in logistical support of IAAS have been evident in the last six months. The Institute now has three passenger vehicles in operating condition as well as a pick-up and the bus. The car assigned to the Dean was brought to Rampur from Kathmandu by Dean Sinha and is used for transportation of faculty and students, in addition to administrative uses. MUCIA had previously granted IAAS a chevrolet suburban and a pick-up but neither had been operated by IAAS. The suburban was put in running order after engine repairs were completed. The pick-up had been operated by MUCIA for both IAAS and MUCIA. It is now operated by IAAS and loaned to MUCIA as needed. A Jeep was granted to IAAS by MUCIA in 1983 and is used extensively by IAAS. These changes have resulted greatly reduced usage of MUCIA

vehicles for transportation of IAAS faculty and students. IAAS has only limited funds for purchase of petrol and has no storage facilities for petrol or diesel, so MUCIA is supplying limited amounts of petrol to IAAS for operation of vehicles.

#### Housing For Female Students

Three female students of IAAS are provided housing in a small MUCIA trailer. The lack of adequate housing for female students was a point of contention between students and IAAS administration. Since no suitable housing facility could be made available by IAAS, this arrangement was worked out between MUCIA and IAAS. The students have access to a small kitchen for preparing their meals.

#### Medical

The campus medical clinic has been completed under the AID rupee grant program. In early April, 1983, Dr. K.M. Wasiq, ophthalmologist and former Pakistani Army Medical Officer, arrived at IAAS for a four months residency. MUCIA has provided housing in one of the small trailers, a motorbike for his travels to Bharatpur hospital where he performs surgery, and some medical supplies. IAAS has provided a meal allowance.

Dr. Wasiq's services were sponsored by the Spencer Eye Hospital, Karachi, courtesy of Dr. M.H. Rizvi, Medical Superintendent, who had visited Rampur in January and taken note of our need for medical aid which coincided with a Pakistani program to establish an eye surgical unit at Bharatpur. In addition to establishing his eye

clinic, Dr. Wasiq has been available to students daily in the new IAAS medical clinic and available around the clock for emergencies. His presence has been much appreciated.

Prior to Dr. Wasiq's arrival at Rampur, a number of bizarre accidents on campus increased our awareness of the general lack of safety consciousness in Nepal and our remoteness from medical aid. Lecturer S. Tivari walked at night into a deep, unguarded trench dug across a main path and sustained head injuries and shock; a laborer died in a sewage trench cave-in; the hands of another construction laborer were mangled and fingers amputated on a cable of the water tower lift. A student was injured in a fall from a hostel roof. These and other community emergency cases were transported to Bharatpur hospital by the MUCIA team. In May, two small boys drowned in one of the fishponds under construction. A Jersey bull at the North Farm seriously injured two farm employees and Ram Sharma, MUCIA Maintenance Supervisor, underwent the painful series of 13 injections for rabies after having been bitten by a dog.

The unfortunate death of Merle Thorne has underscored the inaccessibility of medical care of the quality and convenience to which team personnel have been accustomed at home. For convenience and personal reasons, the team increasingly uses the Canadian CIWEC Clinic in Kathmandu for medical treatment rather than the Embassy Medical Unit. Landslides during monsoon and erratic driving of buses and trucks make the trip to Kathmandu both dangerous and nerve-racking. The left-hand drive of MUCIA vehicles increases the hazard of travel.

## Safety

The construction-site accidents have all been preventable. Completion of construction has removed many of the hazards but others remain elsewhere. MUCIA has rearranged offices and re-opened one of the rear exits to the IAAS auditorium which had been sealed. However, the stage curtains and ceiling are flammable and the front exits are neither placed nor constructed to permit easy exit. Some new fire extinguishers have been obtained for the MUCIA compound but more are required throughout campus. Fume hoods and other emergency facilities were not included in the construction of IAAS laboratories and general carelessness in handling electrical connections poses a continuing hazards throughout the campus. Since the completion of the ring road, MUCIA vehicles have been directed off the internal pedestrian walkways, but other vehicles, including trucks, tractors and motorbikes still prefer the shortcuts which poses danger to pedestrians and bicyclists.

## Computer

The APPLE II Plus computer system has worked well the past year with minimal maintenance required. The computing center has been capably managed by P.P. Sharma. The computer room has been air-conditioned and access to the computer room well controlled. The library of software has been expanded with acquisitions by MUCIA, advisors, and USAID computer enthusiasts. Dr. Jake van der Vlugt, USAID and members of Haraste APPLE computer club in Kathmandu have been especially helpful. Both the Animal Science Advisor and the Rural Development Advisor have acquired personal computer systems which work with APPLE programs.

## Library

A full set of attractive and sturdy wooden library furnishings has been installed under the AID rupee grant project. In addition, numerous volumes of books have been granted to IAAS through MUCIA. Gifts from faculty, advisors and friends of IAAS have expanded the collection. The library reference collection would be greatly strengthened with current subscriptions and back volumes of scientific abstracts and selected journals to aid in research for classroom teaching and for the development of more complete literature reviews for research proposals than is possible at present.

MUCIA has continued to provide financial support needed to keep the library open in the evenings. A staggering of hours of library staff and the addition of some new staff will soon make this no longer needed.

## APPENDIX I

For Team Leader's Semi-Annual Report

Submitted: July 19, 1983

To be revised and updated during current 6-month period.

Trip Report  
IAAS/Lanjung Campus  
March 13- 14, 1983

To: Dr. M. Thorne  
From: Dr. H. Whittier  
Date: March 15, 1983

Participants from IAAS/Rampur:

H.L. Whittier  
Dean Sinha  
Navraj K.C.  
Narayan Kumar

I. Summary: The participants listed above made a two-day field trip to the Lanjung campus to discuss local problems and to become acquainted with the campus.

March 13: 06:00am - 12:20pm Travel from Rampur to Lanjung  
12:30pm - 02:00pm Meeting with Campus Chief and staff  
02:00pm - 04:00pm Campus tour  
04:00pm - 05:00pm Meet with students; give presentations  
06:00pm - 07:00pm Meet with staff  
07:00pm - 10:30pm Social gathering and dinner with staff

March 14: 08:00am - 09:00am Meet with staff and local leaders over water problems  
09:00am - 10:30am Meet with students; farewell party for Mr. Thapa, staff member transferred to Rampur.  
10:30am - 11:00am Lunch  
11:30am - 12:30pm Tour horticulture farm (185 mangoes of three varieties planted)  
01:30pm - 05:30pm Travel from Lanjung to Rampur

II. Specific data about Lanjung Campus current as of March 15, 1983.

A. Teaching Staff

1. Mr. Satya Tiwary - Campus Chief - Extension Education  
M.Sc. 1979 - Ohio State University (MUCLA)  
B.Sc. - Punjab Agricultural University.
2. Mr. M. Mohan Sharma - Temp. Teacher - Horticulture  
B.Sc. 1981 - IAAS/Rampur  
Born 1958; Dang District  
Not married.
3. Mr. Miraj Joshi - Temp. Teacher - Horticulture  
B.Sc. 1979 - Pantanagar, India  
I.Sc. 1975 - IAAS/Rampur  
Born 1955 - Lalitpur District  
Recently married; no children.
4. Mr. Mana Raj Kolachhapati - Temp. Teacher - Livestock  
B.Sc. 1981 - Punjab Agricultural University  
I.Sc. 1976 - IAAS/Rampur  
Born 1958 - Palpa District  
Not married.
5. Mr. Bir Bahadur Thapa - Temp. Teacher - Agricultural Extension  
B.Sc. 1982 - IAAS/Rampur  
Born ; Dailekh District  
Not married.
6. Mr. Devi Gokimire - Temp. Teacher - Agronomy  
B.Sc. 1980 - Hariyana Agriculture University  
I.Sc. 1976 - IAAS/Rampur  
Born ; Bhojpur District  
Married; two children.
7. Mr. Ramesh Pokharel - Temp Teacher - Agronomy  
B.Sc. 1980 - Hariyana Agricultural University  
I.Sc. 1976 - IAAS/Rampur  
Born ; Jhapa District  
Married; no children.

8. Mr. Kishor Prasad Gajurel - Temp. Teacher - Livestock  
B.Sc. 1981 - IAAS/Rampur  
Born 1957; Kathmandu  
Married; no children.
9. Mr. Parindra Thapa - Temp. Teacher - Farm Management  
Transferred as of now to IAAS/Rampur; replacement not yet  
arranged but one is needed.  
B.Sc. 1979 - Pantnagar, India  
I.Sc. 1974 - IAAS/Rampur  
Born 1953; Okhaldhunga District  
Married; no children.

B. Major Administrative Staff

1. Mr. Jagan Nath Chalise  
Assistant Administrative Officer  
Home District: Lalitpur
2. Mr. Bhanu Bhakta Neupane  
Head Assistant  
Home District: Lamjung
3. Mr. Keshab Prasad Shrestha (provided campus budget figures below)  
Account Officer  
Home district: Lamjung

C. Staff summary

- 1 Campus Chief
- 7 Teaching staff - all temporary hires
- 2 Administrative Officers
- 11 Assistant administrative staff
- 16 Lower level staff (including peons, guards, cowboys, etc.)

#### IV. Student Statistics by Year

	<u>admitted</u>	<u>sat for exam</u>	<u>graduated with JTA level</u>
1983-1984	175 are projected to be enrolled July 20, 1983		
1982-1983	175	162 (3 women)	results not yet in
1981-1982	177	166	results not yet in
1980-1981	160	125	125
1979-1980	114	82	77
1978-1979	95	79	73
1977-1978	60	53	49

Notes: 1. The 1982-1983 class was the first to include female students; four were admitted; one dropped out and three will sit for the exam. A co-op building on campus has been converted to a temporary women's dormitory.

2. All students from the 1983 graduating class will be allowed to continue for JT level training at the Paklihawa campus.

#### V. Budget for all campus operations

1983-1984 (2040-41) - 57,84,394/70 rupiah requested  
1982-1983 (2039-40) - 08,69,500/00 rupiah  
1981-1982 (2038-39) - 07,88,500/00 rupiah  
1980-1981 (2037-38) - 04,22,900/00 rupiah  
1979-1980 (2036-37) - 12,73,063/00 rupiah  
1978-1979 (2035-36) - 03,31,800/00 rupiah  
1977-1978 (2034-35) - 11,24,462/00 rupiah  
1976-1977 (2033-34) - separate records not available; kept at IAAS/Rampur.  
1975-1976 (2032-33) - as above

#### VI. Physical Facilities

- 1 Administration Building with offices for Campus Chief, two offices for teaching staff, and two offices for administrative staff.
- 1 Library building - 4000 volumes as a very rough estimate.
- 1 Student hostel that can house 64 students
- 1 Student mess hall - currently unused because no contractor; students eat in the bazaar.

- 1 Classroom building with 3 classrooms; currently 59 students in each of two classrooms; third is used for laboratory.
- 4 Staff quarters currently housing all teaching staff.
- 1 House for Campus Chief; also serves as guest house.
- 1 Co-op building; currently used as women's hostel.
- 2 Livestock shelters.

#### VII. Livestock Inventory

- 8 Sheep; will be reduced to 2 because of feed problems
  - 2 goats received from Rampur last week-mixed Janakpur/local breed.
  - 3 buffalo cows - 1 local, 2 murrah.
  - 1 buffalo bull
  - 2 cows - Hariyana
  - 1 bull
  - 2 calves - Hariyana
  - 1 horse - transportation for Campus Chief
  - 2 pair bullocks
- Previously 120 chicks were raised to maturity for eggs; no eggs were forthcoming and the flock was done in.

#### VIII. Land Use Categories

- Total land: 324 rokni = 16 hectares
- 50 rokni - for livestock
  - 64 rokni - for agronomy
  - 86 rokni - for horticulture (185 mango trees, want 100 more)
  - 30 rokni - for student projects
  - 20 rokni - mixed forest (timber, firewood, ornamentals)
  - 74 rokni - other uses - buildings, sports field, etc.

#### IX. Water Problem

Lack of water is a major difficulty. Student projects, gardens, and experiments cannot be controlled or even executed because of lack of

water. Likewise, fishpond structure cannot be used. During our visit drinking water was not even available on campus. Students must walk 20-30 minutes to baths.

## **X. Campus Development Needs**

These items account for the large budget requested for 1983-84.

Staff quarters for 6 families - teaching and administrative staff.

Staff quarters for 4 families - support staff

Student hostel for women to accommodate 20

Laboratory building

Office building including store and clinic

Classroom/auditorium with seating capacity for 200

Water supply (see IX)

## **II. Additional Notes**

### **A. Staff**

There is a need for additional staff, including the immediate need for a farm manager. The current staff need to receive permanent appointments. Currently, only the Campus Chief holds a permanent appointment. Other staff members are appointed on three-month, renewable contracts. Some staff members have been teaching at Lanjung on this temporary basis for three and a half years.

**B.** More student hostels are needed. The campus can now house only 67 of the 162 students. Others must seek lodging with families at about 20-25 rupiah per month. They pay about 200 rupiah per month to eat in the bazaar. One faculty member estimates that about 10% of the students are married. Formerly, the vast majority of the students came from Lanjung District, but now

they come from other areas as well. Lanjung is still the leading home district for students, with the second largest number coming from Tanam, followed by Gorkha, Chitwan and other districts.

- C. Lanjung campus is located in Sundar Bazaar Panchayat which contains approximately 500 families; 70 of these live in the bazaar proper.
- D. The student drop-out rate is fairly low, but when students do drop-out the most frequent reason is to join the British or Indian armies.
- E. This material is a draft only. A set of photographs was taken during the visit including photographs of all campus buildings, of the staff, and group photographs of the students.

## APPENDIX II

For Team Leader's Semi-Annual Report.

Submitted: July 19, 1983

To be revised and updated during the current 6-month period

Trip Report  
Paklihawa Campus  
March 16-17, 1983

H.L. Whittier  
March 18, 1983  
Draft Copy

### Participants from Rampur:

Dean Sinha  
H.L. Whittier  
Tej Bahadur K.C.  
Kailash N. Pyakuryal

### I. Summary

A two-day trip was made to the Paklihawa campus of IAAS to become acquainted with the campus and its progress and to gather current information on local problems.

### Schedule:

March 16: 10:00am - 01:00pm - travel to Bhairawa  
01:00pm - 02:00pm - visit fisheries development project in Bhairawa  
02:00pm - 04:00pm - meet with Campus Chief and his staff; campus tour  
05:00pm - 06:00pm - meet with JT and JTA students  
06:00pm - 07:00pm - meet with selected faculty members (Indian contract)  
07:00pm - 09:30pm - meet with Campus Chief over dinner

March 17: 08:00am - 09:30am - meet with faculty  
09:30am - 10:30am - Lumbini field trip  
10:30am - 12:00pm - meet with campus administrators; gather data  
12:15pm - 01:30pm - visit Bhairawa District Agricultural Officer, Mr. Kashi Kant Jha, discuss local problems

01:45pm - 02:15pm - revisit to fisheries development project  
 02:15pm - 02:45pm - visit Batural Gober Gas plant to discuss  
 possibilities of their supplying a gas  
 plant to IAAS  
 02:50pm - 03:10pm - visit Batural Furniture Factory to see  
 how work is progressing on furniture  
 for IAAS library, etc. Behind schedule  
 but whole plant is working on the project.  
 03:10pm - 06:00pm - return travel to Rampur

## II. Staff at Paklihawa Campus

### a. Teaching staff and their biodata

1. Badri Bahadur Singh Dongol - Campus Chief  
 Lecturer - Extension Education  
 M.Sc. 1979 - Udaipur University, India  
 B.Sc. 1974 - Udaipur University, India  
 I.Sc. 1970 - Tribhuvan University, Kathmandu  
 Born: Jan 3, 1950; Gophal Tole, Kathmandu  
 Married; two children.
2. Shyam Shankar Jha - Temp. Appointment  
 Assistant Lecturer - Farm Management  
 B.Sc. 1979 - Udaipur University, India  
 Higher Education 1974 - Udaipur University, India  
 Born: July 10, 1956; Mahotari District, Nepal.  
 Married (?)  
 Joined IAAS: 1979 at Paklihawa.
3. Gopal Chandra Sharma - Temp. Appointment  
 Assistant Lecturer - Extension Education  
 B.Sc. 1982 - IAAS/Rampur  
 Certificate 1980 - Vocational Agriculture Education;  
 Sanothiri, Kathmandu  
 Born: April 27, 1959; Jhapa District, Nepal  
 Not married  
 Joined IAAS : 1982 Paklihawa.

4. Jagat Lal Yadav - Permanent Appointment - Animal Science  
 M.Sc. 1982 - Hariyana Agricultural University  
 B.Sc. 1975 - Punjab Agricultural University  
 I.Sc. 1970 - Punjab Agricultural University  
 Born: April 9, 1954; Siraha District  
 Married ; 3 children  
 Joined IAAS: 1977 Paklihawa
  
5. Suroj Pokharel - Temp. Appointment  
 Assistant Lecturer - Animal Science  
 B.Sc. 1982 - IAAS/Rampur  
 I.Sc. 1978 - IAAS/Lanjung and Rampur  
 Born: March 1960; Gorkha District  
 Not Married  
 Joined IAAS: 1983 Paklihawa
  
6. Shrawan Kumar Sah - Permanent Appointment  
 Assistant Lecturer - Agronomy  
 B.Sc. 1981 - IAAS/Rampur  
 I.Sc. - Tribhuvan University, RR Campus, Janakpur  
 Born: 1959; Mahotari District, Nepal  
 Not married  
 Joined IAAS: 1981 Paklihawa
  
7. Tej Bahadur Nepali - Permanent Appointment  
 Lecturer - Agronomy and Botany  
 M.Sc. 1972 - Gauhati University, Assam  
 3-year degree 1970 - Gauhati University, Assam  
 Pre-university 1965 - Gauhati University, Assam  
 Born: March 1, 1949; Parbat, Dhaulagiri, Nepal  
 Married  
 Joined T.U. Sanathini Campus: 1973  
     IAAS Paklihawa on deputation: 1979  
     IAAS Paklihawa transfer: 1980
  
8. Purandhar Dhital - Temp. Appointment  
 Assistant Lecturer - Horticulture  
 B.Sc. 1981 - IAAS Rampur

I.Sc. 1970 - Birganj  
Born: Sept. 21, 1952; Makwanpur District  
Married  
Joined IAAS 1983 Paklihawa

9. Tripuri Prasad Singh - Temp. Appointment  
Assistant Lecturer - Zoology  
M.Sc. 1978 (Zoology)  
B.Sc. 1975 (Zoology, Chem., Physics)  
I.Sc. 1973  
Born: Jan 1, 1955; Saptari District, Nepal  
Married; two children  
Joined IAAS: 1981 Paklihawa

10. Dhruva Narain Pathak - Permanent Appointment  
Ph.D. 1978 (Organometallic chemistry) India  
M.Sc. 1971 (Chemistry) India  
B.Sc. 1969 (Physics, Chemistry, Math) India  
I.Sc. 1965 (Science) India  
Born: Feb. 1, 1950; Rupandehi District, Nepal  
Married; three children  
Joined IAAS: 1981 - on deputation from RECAST, Kirtipur  
(Kathmandu)

11. Narayan Prasad Khanal  
Assistant Lecturer - Nepali  
M.A. 1981 (Sanskrit) Acharya  
M.A. 1980 (Nepali)  
B.A. 1974 (Sanskrit) Shastri  
I.A. 1972 (Sanskrit) Uttaradhyana, Benaras  
Born: ; Nawal Parasi, Nepal  
Joined IAAS: 1982 Paklihawa

The remaining members of the teaching staff are all Indian contract hires.

12. N.P. Tewari - Contract  
Lecturer - Zoology

Ph.D. 1978 - University of Gorakhpur, India (Zoology)  
M.Sc. 1973 - University of Gorakhpur, India (Fisheries, Biology)  
B.Sc. 1971 - University of Gorakhpur, India (Zoology, Botany,  
Chemistry)  
I.Sc. 1969 - U.P. Board, Allahabad, India (Science, Biology,  
Math, English, Hindi)  
Born: Sept. 8, 1950; Deoria, U.P. India  
Married; two children  
Joined IAAS: 1980 Paklibawa as contract lecturer

13. Tarkeswar Prasad Tripathi - Contract

Lecturer - Chemistry

M.Sc. 1979 - Gorakhpur University - Chemistry

B.Sc. 1977 - Gorakhpur University - Botany, Zoology, Chemistry

I.Sc. 1975 - Gorakhpur University - Physics, Chemistry, Biology,  
Hindi, English

Born: July 1, 1957; Gorakhpur, U.P., India

Married; two children

Joined IAAS: Oct. 1980 at Paklibawa

14. Shailendra Kumar Mani Tripathi - Contract

Lecturer - Math and Physics

Ph.D.(thesis ready for submission)-Lucknow University, India

M.Sc. 1974- Lucknow University, India - Chemistry

B.Sc. 1972- Lucknow University, India - Physics, Chemistry  
Math, English

I.Sc. 1969- India - English, Science, Hindi

Born: March 1, 1954; Gorakhpur, U.P., India

Married; three children

Joined IAAS: Nov. 1980 at Paklibawa

15. Krishna Nath Pandey - Contract

Lecturer - English

M.A. 1979 - Gorakhpur University - English and American Lit.

B.A. 1976 - Faizabad - English, Hindi, Economics

Intermediate 1974 - Basti - English, Hindi, History, Civics,  
Economics

Born: July 21, 1957; Basti, U.P., India

Married

Joined IAAS: 1980 at Paklihawa

b. Summary of Current Staff and Projected Needs

<u>Subject</u>	<u>Current</u>	<u>Needed (by July 20, 1983)</u>
<u>1st year</u>		
Agronomy	1	+1
Horticulture	2	-
Animal Science	1	+1
Farm Management	1	-
Extension	1	-
<u>2nd year</u>		
Chemistry	2	-
Physics	0	+2
Botany	2	-
Zoology	2	-
Math	1	+1
English	1	+1
Nepali	1	+1
Nepali Parichaya	<u>0</u>	<u>+2</u>
	15	+9

Total requirements by July 20, 1983 = 24 teaching staff.

Note: The official Paklihawa listing reports the following teaching staff:

- 1 Campus Chief
- 3 Lecturers
- 16 Asst. Lecturers
- 2 Instructors

For a total of 22 teachers, but there are now, in fact, only 15 teachers (as listed in II A). I have no information about the others except that two have gone to Kathmandu, one to join RCUP and one to join IAG.

c. Non-teaching Staff

2 Administrators

1 Asst. Administrator

1 Account Officer - position now vacant

16 Junior-level Administrators

(includes 2 accountants)

39 Lower-level Staff

(includes lab boys, peons, chowkidars, mails, etc.)

III. Student Body

Year	Quota	Admitted	Sat for Exam	Passed	System
2035-36 (1978-79)	112	99	99	83(1)	semester
2036-37 (1979-80)	300	301	300 est.	255(8)	semester
2037-38 (1980-81)	JTA 150 JT 272	165 280	134 280 est.	17(1) 261(3)	annual semester
2038-39 (1981-82)	JTA 175 JT —	195 —	164 —	May '83 —	annual —
2039-40 (1982-83)	JTA 175 JT 200	212(1) 200(3)	group begins Ap. '83 group began Mar. '83		annual annual
2040-41 (1983-84)	projected JTA 213 JT 526	begin July 1983			

- Notes:
1. Total (JTA + JT) projected for 2040-41 = 739
  2. Numbers in ( ) show how many of total are females.
  3. The 526 JT students expected for 2040-41 includes 162 from Lanjung, 164 from Paklihawa, and 200 just admitted. The 1st two groups will arrive July 20, 1983, and the other began March 6, 1983. This large increase in students, with attendant needs for increased staff and facilities, accounts for a large portion of the budget increase requested (see IV. below).

#### IV. Budget

1983-84 (2040-41) - 28,00,000/00 rupiah requested  
1982-83 (2039-40) - 12,34,500/00 rupiah (28 lakh requested for 2039)  
1981-82 (2038-39) - 09,94,000/00 rupiah  
1980-81 (2037-38) - 09,56,500/00 rupiah  
1979-80 (2036-37) - 09,59,146/55 rupiah  
1978-79 (2035-36) - 03,66,189/61 rupiah

#### V. Physical Facilities

The Paklihawa campus is a large facility with present buildings in fairly good condition. The buildings are adequate for present enrollments, but with the increases in staff and students enrollments expected by July, 1983, new facilities will be needed. Even if some of the buildings that are currently vacant are brought into use, as many as 180 students will be without adequate housing. In addition, new furniture (cots, etc.) will be needed to provide for new staff and students. About 5,00,000 rupiah of the new budget projection is allocated for these needs. I did not obtain a complete list of the physical facilities. Following is a list of major facilities:

- 7 Classrooms (capacity 70-75)
- 11 Buildings suitable for hostels (9 presently occupied)
- 1 Building for the three female students
- 1 Zoology lab
- 1 Agronomy lab
- 1 Chemistry lab plus several other lab rooms
- 1 telephone room
- 2 administration buildings
- 1 temple site
- 4 livestock buildings (cattle, goats, chickens, ducks)

Present student housing facilities can accommodate about 400 students.

With the addition of furniture and equipment, five now-vacant buildings could house about 180 more students. This would still leave about 170 of the projected 739 students without housing.

#### VI. Land Use

The campus has a total of 51 bighas of land. There are no water problems. The main campus occupies 17 bighas. There are 34 bighas of agricultural land, but only one bigha is currently under cultivation (wheat) because of lack of equipment.

#### VII. Livestock Inventory

98 Chicks  
 3 Hariyana cows  
 1 Hariyana bull  
 11 Buffalo cows  
 7 ducks  
 11 goats (3 are newborn triplets; 3rd triple birth for this doe)

#### VIII. Current Curriculum

##### JTi Level - Annual System

<u>Marks</u>	<u>Course</u>
100	Agronomy
100	Animal Science
100	Horticulture
50	Farm Management
50	Extension

##### JT Level - Annual System

<u>Marks</u>	<u>Course</u>
100	Botany
100	Zoology
100	Chemistry
100	English

100	Nepali
50	Nepali Parichaya
50	Math
50	Physics

## IX. Misc. Notes

- A. The town nearest the campus is the border town of Bhairawa, Nepal. The campus itself is about  $\frac{1}{2}$  mile from the Indian border.
- B. A major problem at this time seems to be the large number of students expected at the end of July, 1983. As noted, this will require additional staff both teaching and non-teaching as well as clerical personnel; there is currently only one typist on campus and he cannot type English. The increase in staff and students also demands increased housing facilities and furnishings.
- C. An additional problem is that many of the staff are still on temporary appointments (3month, renewable contracts). This affords them little security and no opportunity for further study here or abroad. Several staff members have left partly because of this problem as noted, one has gone to RCUP and another to IMG elsewhere. One of the staff members reports that he has been on this temporary contract basis for nearly four years. The difficulty in confirming permanent appointment seems to be at the T.U. level.
- D. Other problems
  1. Faculty members report problems in being able to provide class handouts for students because of lack of typing pool and of supplies for this purpose.
  2. Faculty members report a lack of chemistry and other lab science supplies.

### APPENDIX III

#### MUCIA/IAAS INDONESIA Study Tour

June 1-June 29, 1963

Herbert L. Whittier

MUCIA/IAAS Rural Development Advisor

Dr. Herbert Whittier, Rural Development Advisor, led a group of five IAAS staff members on a tour of universities, agencies, and development projects in Thailand, Indonesia, and Singapore. Members of the tour were: <sup>Mr.</sup> B.P. Sinha, IAAS Dean; Dr. Kailash Pyakuryal, Assistant Dean for Administrative Affairs; Mr. Santa Man Shakya, horticulturist; Mr. Bhairav Khakural, soil scientist; and Mr. K.T. Augusthy, fisheries specialist.

The first stop on the tour was Thailand where the group spent three days. At Kasetsart University, the group visited the various departments concerned with agriculture, sociology, and rural development. They also visited the offices of the Association of Southeast Asian Nations' (ASEAN) economic development program, located on the university campus. In Bangkok, the group also visited the United States Agency for International Development (USAID). The Agricultural Development Council (A/D/C), and the Asian Institute of Technology (AIT). From June 4th through June 25th (27th) the group toured Indonesia. This portion of the tour began with briefings by the Rural Development and Education and Human Resources office of USAID. The group then visited the following universities: the Institute of Agriculture (IPB) in Bogor; Pajajaran University (UNPAD) in Bandung; Gadjah Mada University (UGM) in Yogyakarta; Udayana University (UNUD) in Denpasar; Airlangga University (UNAIR) in Surabaya; and Brwajaya University (JMERAW) in Malang. Each of these institutions has departments or other units concerned with teaching, research, and public service in

agriculture and/or rural development. At each of these universities, the whole group first met with the Rector or his representatives and with the Deans of the colleges they were interested in visiting. The group then split up and individuals visited those faculties, department, or units most in line with their interests. In some cases the entire group visited major campus research facilities and projects. At each university, tour members collected sample curricula, research reports, and information on public service projects.

In addition to university visits, the group spent one day visiting the USAID-funded Citandui Watershed Mangement Project between Bandung and Yogyakarta. Another day was spent touring the island of Bali to observe the farming systems. This was of particular sociological interest to the group because the Balinese, like many Mapalis, are Hindus and their farming system is based on irrigated rice on hillside terraces. Another day was spent observing farming systems on the island of Madura which, unlike adjacent Java, is dry with less fertile soil and grows primarily maize. While in Malang, the group spent one day visiting a dairy cooperative in the mountains and the Royal Botanical Gardens near Malang.

On June 23rd, the group returned to Jakarta and joined a debriefing at USAID/EDR on the 24th. On the 25th of June the tour group participants flew to Singapore to visit the International Development Research Centre (IDRC) on the 27th. The tour leader remained in Jakarta until the 27th so as to attend a pre-arranged meeting with member of the Government of Indonesian Ministry of Higher Education (the sponsoring agency for the tour) concerning the results of the tour. On the 26th of June the tour leader met with members of AID/INDONESIA's contracting group (PADCO) working with the Training of Agricultural Trainers Project, to discuss

problems of agricultural training.

On the 27th the tour participants flew to Bangkok, and on the 28th had meetings with the United Nations Development Programs Office (UNDP); the Food and Agriculture Organization (FAO); and the International Development Training Centre (IDTC). On the 27th the tour leader flew to Singapore in the evening, and the 28th met with the Director of IDRC for 2 hours, concerning programs at IAAS. On the 28th, the tour leader flew on to Bangkok, and on the 29th, the group rejoined at the airport and returned to Kathmandu officially concluding the tour.

In the course of the tour the group collected a large amount of literature from the various universities, institutes, and agencies materials, and a variety of newsletter and other publications. This material is now in the IAAS library and includes 157 titles (209 items as there are multiple copies of some publications). They also obtained 5 new varieties of cassava and some Leucaena (Ipil-Ipil) seed. These plant materials are now in quarantine at the IAAS Horticulture department.

Tour members are now preparing individual reports on the tour. When these reports are completed and slides developed and assembled, the group will present a seminar for the IAAS faculty.

## APPENDIX IV

### MUCIA/IAAS Mediterranean Livestock Study Tour

3-27 June 1983

Weslie Combs

MUCIA/IAAS Animal Science Advisor

#### TOUR SYNOPSIS

##### Objectives:

The experience of animal science faculty at IAAS who have been trained in Nepal and India is largely limited to traditional, often underdeveloped, livestock systems. Those who have also studied in the United States have added experience at the other extreme with livestock systems of high capital requirement, high technology, high labor efficiency, high dependence upon feeding of grains and other concentrates, and the use of breeds, such as Holstein dairy cattle, which are productive in temperate climates but generally ill-adapted for environments made difficult by climate and by disease and parasites.

The Livestock Tour was proposed to give exposure to traditional livestock systems being modernized in countries between Nepal and the United States on the industrial development scale and which livestock systems might be appropriate development models for Nepal. Some specific goals included:

1. Study of multi-purpose (milk and meat) goat production systems.
2. Evaluation of Damascus (Shami) breed of goats for introduction to Nepal.
3. Study of multi-purpose (milk, meat, wool) sheep production systems.
4. Evaluation of Greek Chios and other breeds of milking sheep for introduction to Nepal.

5. Study of Italian buffalo milking system.
6. Evaluation of Mediterranean buffaloes for introduction to Nepal.
7. Evaluation of milk products of sheep, goats, and buffaloes and study of processing techniques for application in Nepal.
8. Inspection of Italian Chianina cattle for usefulness in crossbreeding for draught purposes in Nepal.
9. Inspection of facilities and evaluation of programs of University of Thessaloniki, Greece, as a possible graduate school for IAAS participants.
10. Conferring with professional counterparts at FAO and other agricultural institutions.

#### Participants:

Participants were nominated by the Dean with suggestions from the Animal Science Advisor that certain disciplines be represented. While the majority were from the Department of Animal Science, representatives from the plant sciences and rural development were also requested. Participants were:

Maheshwar Sapkota, Lecturer in Animal Science; animal nutrition.

Jagat Lal Yadav, Lecturer in Animal Science, Paklihawa Campus; livestock Management.

Bhadra Bilash Pant, Lecturer in Agronomy; seed technology.

Bhola Nath Pokharel, Lecturer in Agricultural Economics.

Nagendra P. Shah, Lecturer in Animal Science; Dairy Processing.

Weslie Combs, Animal Science Advisor; livestock development, animal breeding.

The IAAS participants particularly distinguished themselves with their highly relevant questions asked of farmers, researchers, government agricultural personnel and others interviewed.

The tour concentrated on three locales:

1. Nicosia, Cyprus. Multi-purpose (milk, meat, wool) sheep and goat systems were the focus of attention with special reference to the breeds of Damascus goats and Chios sheep. Private goat and sheep dairy farms, a Ministry of Agriculture livestock breeding farm and the Agricultural Research Institute were visited.
2. Thessaloniki and Central Greece. The University of Thessaloniki Animal Science research farm was the primary focus in northern Greece with visits to the central meat market in Thessaloniki and Ministry of Agriculture livestock research stations and artificial insemination center. Principal emphasis was on sheep milking for cheese and yoghurt production. The American Farm School, National Cereals Centre and Thessaloniki Archaeological Museum were also visited.

The major stop in central Greece was the mountain village of Metsovo which has a cheese factory making several types of cheese from the milks of sheep, goats and cows. Metsovo has also capitalized on tourism as it is situated near a highway through the Balkan.

The National Archaeological Museum was visited in Athens as well as other archaeological sites from which seed of the forage legume, *Medicago arborea*, was gathered.

3. Caserta, Italy. Caserta is the centre of Italy's relatively small but highly developed buffalo milking industry from which virtually all of the production goes into Mozzarella cheese. Private buffalo milking farms were visited including the prominent Jemma Farm which has 170 ha. and 1800 buffaloes including 800 milking females. The

farm has its own factory for making Mozzarella. Jenna Farm bases its feeding program on roughages with relatively little feeding of concentrates and is nearly self-sufficient in feed production. This farm was of particular interest because it is of similar size to the IAAS livestock farms. Several small buffalo dairy farms and a small Mozzarella cheese factory were also visited. Because of the high levels of herd management in Italy, there was disagreement as to the genetic merit of the Mediterranean buffaloes relative to the Murrah milking buffaloes of India. This can only be tested by direct comparisons of the breeds or their crosses. A second high performing breed for crossbreeding would be an asset to Nepal.

F.A.O. headquarters in Rome were also visited and an interview held with members of the livestock development staff.

A one day visit was taken to Siena Province to see Italian Chianina cattle which could be useful in breeding larger, more efficient draught bullocks.

Throughout the tour, livestock products including various meats and cheeses and other milk products were eaten as well as other local foods and dishes.

Livestock Technology Observed with Potential for Application at IAAS and Nepal.

1. Commercial milking of sheep, goats, and buffaloes.
2. Farm milk collection.
3. Recording of milk yield of individual animals on private farms as an aid to management and genetic improvement.

4. Cheesemaking from milk of sheep, goats and buffaloes.
5. Plastic eartag identification of livestock.
6. Early weaning of buffalo calves.
7. Multiple-suckling of buffalo calves on old buffalo cows or on cattle cows.

**Recommendations of the MUCIA Animal Science Advisor as a Result of the Tour:**

1. That the IAAS buffalo herd be brought into some state of organization along the lines of those in Italy with emphasis on roughage feeding rather than concentrates. The Farm Manager, Nagendra Shah, has already begun the identification of the herd by tattoo and eartag. However, he will require such support from the Dean, the Animal Science faculty, and MUCIA to organize and execute the program.
2. That the forage development program being initiated by the planting of *Leucaena leucocephala* by K.R. Tiwari be expanded as rapidly as feasible to provide a year round base of high quality forage.
3. That primary emphasis be placed on the development of facilities and programs for multi-purpose (milk, meat and wool) goat and sheep research and production.
4. That the importation of not less than 12 male and 12 female Damascus goats and 12 male and 12 female Chios sheep be undertaken from Cyprus.
5. That frozen semen of the German East Friesian sheep be imported from Germany to commence crossbred matings to a prolific milking breed.
6. That high priority be given to the establishment of a milk processing facility of at least 1000 litres per day.

7. That on a longer term basis, semen of Mediterranean buffaloes be imported from Italy to test them in crossbred comparisons with the Murrah; and, that semen from Italian Chianina be imported from the U.S.A. to produce larger oxen for tests of efficiency against Hariyara and local bullocks.
8. That the University of Thessaloniki be considered as a graduate school at the M.Sc. level for IAAS faculty and particularly in the fields of milk processing, multi-purpose sheep and goat production (nutrition, breeding, reproductive physiology, milk production).
9. That such livestock tours as this be repeated in future years as a training medium and on such a basis as to earn training credits toward promotion for participants.

APPENDIX V

Department of Horticulture  
Oregon State University  
Corvallis, Oregon 97331  
May 31, 1983

TO : Dr. Wesley Combs, Acting Project Director, NUCIA-NEPAL PROJECT  
FROM: Dr. Maxine Thompson, Horticultural Consultant, Department of  
Horticulture, Oregon State University, Corvallis, OR 97331 USA  
SUBJECT: Observations on the Horticulture Program at IAAS, Rampur, Nepal.  
April 17-20, 1983

Since I was asked to write a summary of my impressions just as I was leaving Rampur, rather than when I arrived, unfortunately I did not ask as many pertinent questions as I might have. Therefore, these comments are based on a very superficial acquaintance with the situation.

It was my impression that very little, if any research is being done in horticulture. Some reasons for this may be as follows:

- 1) Lack of land assigned to the department for research plots. I don't understand why, with all the land available to the Institute, some plots have not been allocated to horticulture. It appeared that the staff felt very limited by lack of land. In my opinion, the Department of Agriculture horticulture farm is too distant from the Institute to be an efficient work site. Land adjacent to the Institute would be much preferred. For tree crops it is essential to have good, well drained land with irrigation available, and an open-field buffer strip between the village and orchards.

- 2) Lack of rewards in terms of salary increase or promotion, for productivity in research. My impression is that a staff member moves up in salary and grade according to number of years served rather than quality and amount of work performed. (If this is correct, why should anyone do more than the minimum required to keep the job, especially considering the very low salaries?)
- 3) Lack of leadership in overall planning as well as specific research projects. The staff is young and seemed enthusiastic, but I wondered if they didn't need some guidance in research planning by a more experienced person. Could MUCIA assist in this area?
- 4) Is there a job description for faculty which specifies that research is part of their responsibility? If not, perhaps this could be generated. This could then be followed up each year with some accountability for accomplishments in research, by way of annual reports.
- 5) Lack of ready access to a journal in which to publish. As I understand it, about the only vehicle in which to publish is the IAAS journal, which appears erratically. Could this area be strengthened to encourage publication so a faculty member's work has some visibility?
- 6) I was told that the faculty gets 12 pay checks a year whether they work only through the school year (10 months) or whether they work also during the school break (an additional month

or more). This lack of reward for doing research in summer seems like a serious disincentive.

I'm sure that you are more aware of these limitations, and others, than I am. It does seem a shame that these young people returning with foreign degrees and some interest and enthusiasm can't be provided with more favorable conditions to stimulate accomplishments. With all the input into developing the physical plant (which seems to be progressing well) and into training for the staff, comparable efforts should be directed towards stimulating productivity, by appropriate personnel management and towards retaining these trained people.

Whereas many serious constraints are evident to casual visitors, I'm sure that your people working there for an extended period can observe the steps forward, which undoubtedly are occurring. I admire your patience and perseverance which will in the long run, help to create a productive agricultural Institute for Nepal.

Thank you again for your cordial hospitality.

## APPENDIX VI

### END OF TOUR REPORT

By- Dr. Kazi Wasiq  
10th April to  
25th July 1983

#### INTRODUCTION

I, Kazi Mohammad Wasiq, graduated in medicine (MBBS) from Dow Medical College, Karachi, Pakistan in 1979. I served in the Pakistan Army for two and half years. I joined Spencer's Eye Hospital, Karachi, Pakistan, for post graduate training in ophthalmology, and have been working with the same organisation for the last two years. I came to Nepal on a four months' assignment, commencing from 10th April 1983.

#### PURPOSE OF VISIT AND ITS BACKGROUND

A team of ophthalmologists headed by Dr. M.H. Rizvi from Pakistan came to Nepal in December 82 on a Blind Relief Mission and arranged eye camps at various places in Nepal. During their stay they found the vast number of eye patients, in contrast to meager medical facilities available in the country; Dr. Rizvi then decided to establish an eye hospital at Bharatpur. He also had visited the Institute of Agriculture and Animal Sciences at Rampur, where he was requested by MUCIA to provide a doctor at Rampur.

To start the eye care services in the Narayani Zone, and to provide general medical care at Rampur, I was sent here.

#### INSTITUTIONAL FACILITIES

The Institute of Agriculture and Animal Sciences is situated at Rampur about 9KM southwest of Bharatpur in the Chitwan District of Narayani Zone.

The campus has a population of about 700 people, including students, staff and field workers, with a small dispensary to look after their health.

Sri Mahendra Adarsha Chikitsalaya is a 50 bed Hospital located at Bharatpur in Narayani Zone, having a population of about three hundred thousand people. It is quite well equipped to deal with all kinds of medical emergencies with operation theater, X-Ray, and laboratory facilities. The services of physician, Surgeon, Gynaecologist and Dental Surgeon add to its capabilities.

I was given accomodation by MUCIA at Rampur along with a motortbike facility for daily trips to Bharatpur for eye services there in the morning session. And in the evening session I looked after the clinic at IAAS campus, Rampur for general patients.

#### DUTIES AND RESPONSIBILITIES

At Bharatpur I looked after the patients with eye problems treating them accordingly. Cases needing medical treatment were prescribed/provided medicines, those requiring surgery were operated, and patients with refractive errors were given spectacle corrections after refraction tests.

At Rampur, I looked after the patients from IAAS as well as some local citizens from the area around. Besides that, emergency calls were also attended as and when they came.

#### SUMMARY OF CASES

At Bharatpur civil Hospital I examined about 600 patients in the OPD. Major problems encountered were:-

1. Refractive Errors

127 patients

2. Ac. Purulent Conjunctivitis	97 patients
3. Ch. Conjunctivitis	52 ,,
4. Corneal opacities and Ulcers	57 ,,
5. Cataract	62 ,,
6. Lid afflictions	47 ,,

At Rampur usually the daily sick report was very little. The type of illnesses encountered were routine mild problems of diarrhoea, fever, cough headache. No serious disease was encountered.

#### OBSERVATIONS AND SUGGESTIONS

While working at Bharatpur Hospital I noticed that a 50 bed hospital feeding a large area and huge population is insufficient to provide medical care, and maintain the standards of hygiene.

The majority of problems encountered were mainly due to lack of knowledge in personal and community hygiene, family planning, and unbalanced diet among the greater bulk of population, the villagers.

Refractive errors were mainly from the literate part of Narayangarh and Bharatpur.

Ac. purulent Conjunctivitis was found among many members of same families living in single room house using dirty clothes and hands to rub the eyes resulting in infection, corneal abrasion ulcers and ultimately leading to corneal opacities and diminished vision

Contract and its sequel was another major problem found. Some of them were operated, few of the patients went back to seek advice from relatives and

didn't turn up and some refused operation due to their seasonal choice for operation.

Glaucoma and trachoma was a little less than what was claimed in this area.

At Bharatpur hospital, the strength should be increased to 100 beds for better medical care.

Dissemination of health education in terms of personal and community hygiene, family planning can be done through the help of school teachers to the deeper levels of country.

Extensive eye camp programmes can reduce the backlog of cataract patients.

At Rampur campus, the clinic should be supplied with necessary medicines in order to provide better medical facilities.